

GOVERNMENT POLYTECHNIC JAJPUR

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LESSON PLAN

1ST SEMESTER, MATH & SC

DISCIPLINE	SEMESTER	NAME OF THE TEACHING FACULTY: Pragyan Priyadarsini & Sarada Prasad	
SUBJECT: ENGG. M MATHEMATICS-I	NO. OF DAYS/WEEKS CLASS	SEMESTER FROM DATE : 25/10/2021	TO DATE:
WEEKS	CLASS DAY	NO. OF WEEKS: 15	
WEEKS	CLASS DAY	TOPICS	
1st	1st	i) Introduction of matrices	
	2nd	ii) Types of matrices	
	3rd	iii) Algebra of matrices (sum)	
	4th	iv) Algebra of matrices (Difference)	
	5th	v) Product of matrices	
2nd	1st	i) Product of matrix and a scalar	
	2nd	ii) Equality of matrices	
	3rd	iii) Transpose of matrix	
	4th	iv) Co-factor	
	5th	v) Determinant of third order	
3rd	1st	i) Inverse of a matrix(Third order)	
	2nd	ii) Crāmer's Rule three equations and three unknowns	
	3rd	iii) Cramer's Rule two equations and three unknowns	
		iii) Class test-1	
	4th	iv) Cramer's Rule three equations and three unknowns	
5th	v) Relation between Trigonometrical ratios		
4th	1st	i) Trigonometrical ratios	
	2nd	ii) Inverse function	
	3rd	iii) Discuss Addition formulae and Difference formulae	
	4th	iv) Compound angles withn examples	
	5th	v) Multiple and sub-multiple angles with examples	
5th	1st	i) Quadrant	
	2nd	ii) Discuss Exercise of Trigonometry	
	3rd	iii) Discuss objective type questions with answer	
	4th	iv) Introduction of Inverse Trigonometry function	
	5th	v) Domain and Range of Inverse Trigonometry function	
6th	1st	i) Properties of Inverse Trigonometry functions	
	2nd	ii) Discuss Exercise of Trigonometry	
	3rd	iii) Introduction of geometry in two dimension	
	4th	iv) Area of a triangle	
	5th	v) Define slope of a line	
7th	1st	i) Angle between two lines	
	2nd	ii) condition of perpendicularity and parallelism.	
	3rd	iii) Discuss objective type questions with answer	
	4th	iv) Class test-2	

	7th	iv) Different forms of straight lines
	5th	v) One point form
8th	1st	i) Distance formulae
	2nd	ii) Two point form
	3rd	iii) Centroid of Triangle
	4th	iv) Slope form
	5th	v) Intercept form
9th	1st	i) Parallel to a line & Perpendicular to a line
	2nd	ii) Parallel to a plane
	3rd	iii) Distance of a point from a line
	4th	iv) Discuss objective type questions with answer
	5th	v) Equation of a circle
10th	1st	i) center radius form
	2nd	ii) Center radius form
	3rd	iii) Equation of circle passing through three given points
	4th	iv) Equation of a circle with given end points of a diameter
	5th	v) Introduction of geometry in three dimension
11th	1st	i) Section formulae
	2nd	ii) Centroid of Triangle
	3rd	iii) Direction cosine
	4th	iv) Angle between two lines
	5th	v) Condition of parallelism and perpendicularity
12th	1st	i) Relation between direction ratios and direction cosines
	2nd	ii) Equation of a plane
	3rd	iii) General form
	4th	iv) Angle between two planes with examples
	5th	v) Perpendicular distance of a point from a plane
13th	1st	i) Parallel to a plane
	2nd	ii) Perpendicular to a plane with examples
	3rd	iii) Equation of a plane passing through three non-collinear points
	4th	iv) Distance of a point from a plane
	5th	v) plane through the intersection of two given planes
14th	1st	i) introduction of a sphere
	2nd	ii) Equation of a sphere
	3rd	iii) Center radius form
	4th	iv) Important questions of find Radius and centre
	5th	iv) General equation of sphere
15th	1st	i) some examples of general equation of sphere
	2nd	ii) Equation of sphere passing through four given points
	3rd	iii) Examples of Equation of sphere passing through four given points
	4th	iv) Two end points of a diameter form
	5th	v) Discuss Exercise of sphere

LERNING RESOURCES

SL.NO	AUTHOR	TITLE OF THE BOOK	PUBLISHER
1	CHITTARANJAN MALLICK & SUSMITA MALLICK	ENGINEERING MATHEMATICS PART -1	KALYANI
2	ODISHA STATE BUREAU EXPERTS	ELEMENTS MATHEMATICS - Vol.- 1 & 2	ODISHA STATE BUREAU
3	R.D SHARMA	MATHEMATICS PART- I & PART- II	NCERT PUBLICATION

* Sarada Prasad Jena .

Pragyan Pradyumnini
Signature of the Faculty