



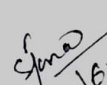
DISCIPLINE : All Branches	SEMESTER : 1st	NAME OF THE TEACHING FACULTY : Satabdika Nayak Anirudha Panda Rollea Maharana	
SUBJECT : ENGG. MATH-I	NO. OF DAYS/PER WEEK CLASS ALLOTTED:05	SEMESTER FROM DATE : 16.08.2023 TO DATE : 11.12.2023	
WEEK :	CLASS DAY :	NO. OF WEEKS : 15	
		THEORY TOPIC :	
1 ST	1 ST	Types of Matrices with definition of Matrix	
	2 ND	Addition of Matrices	ALGEBRA OF MATRICES
	3 RD	Scalar Multiplication	
	4 TH	Matrix Multiplication	
	5 TH	Numericals based on Algebra of Matrices	
1 ST	Determinant defination		
2nd	2nd	Exchange of rows and columns properties of determinant	
	3rd	Operation in rows and column	
	4th	Condition of inverse	
	5th	Minor and cofactor	
3 RD	1st	Adjoint of a matrix	
	2nd	Inverse of matrix	
	3rd	Cramers rule	
	4th	Solving equation based on crammers rule	
	5th	Forming equation in to matrix form	
4TH	1st	Solving 2 nd order matrix by matrix method	
	2nd	Solving 3 rd order matrix by matrix method	
	3rd	Checking the solution	
	4th	Angles,system of angle measure Formula to get trigonometric ratios	
	5th	Sign convention and relation	

WEEK :	CLASS DAY :	THEORY TOPIC :	
5 TH	1 ST	Compound angles $(90^\circ + \theta)$, $(90^\circ - \theta)$	
	2 ND	$180 + \theta$, $(180 - \theta)$ $(270^\circ \pm \theta)$ $(360^\circ \pm \theta)$,	
	3 RD	Multiple angles $(\sin\theta / \cos\theta)2\theta$	
	4 TH	Similarly $(\sin/\cos/\tan 3\theta)$	
	5 TH	Submultiple angle $\sin/\cos/\tan(\theta/2)$	
6th	1ST	$\sin/\cos/\tan(\theta/4)$	
	2nd	Definition of inverse circular function	
	3rd	Range of the function	
	4th	Inverse property \sin^{-1} , \cos^{-1} , \tan^{-1} , \csc^{-1} , \cot^{-1} pairing properly from \sin^{-1} to all invers function.	
	5th	$\tan^{-1} x + \tan^{-1} y$ and other invers.	
7th	1st	2dimentional geometry,introduction,rectangular co ordinate system	
	2nd	Distance formula and division formula	
	3rd	Median,co ordinate of centroid,area of triangle	
	4th	Slope of a line,angle of inclination	
	5th	Angle between two lines,condition of perpendicularity and parallism	
8th	1st	Equation of line in slope intercept form,two point form	
	2nd	Equation of line in point slope form,intercept form,normal form	
	3rd	Perpendicular form	
	4th	Equation of a line passing through a point and parallal to a line	
	5th	Equation of a line passing through a point and perpendicularto a line	
9th	1 ST	Equation of line passing through intersection of two line	
	2 ND	Equation solving on two point form.	
	3 RD	Distance of a point from a line.	

	4 TH	Equation of circle by under radius form.
	5 TH	Find out center and radius
10th	1ST	Equation of circle in general form
	2nd	Condition to become a circle
	3rd	$r(h,k)$ to find from equation
	4th	Problem on different type.
	5th	Equation of circle two points of diameter form
11th	1st	Distance formula.
	2nd	Section formula.
	3rd	Direction ratios and direction cosine.
	4th	Angle between two lines.
	5th	Condition of perparallelosim
12th	1st	Condition of perpendicular.
	2nd	General form of a equation of a plane
	3rd	Angle between two planes
	4th	Perpendicular distance of a point from a plane.
	5th	Equation of a plane through a point and parallel to a plane.
13th	1 ST	Equation of a planethrough a point perpendicular to a plane.
	2 ND	Conversion of one form to another form.
	3 RD	General form.
	4 TH	Condition of planes parallel & perpendicular.
	5 TH	Different equations of plane.
14th	1ST	Equqtion of sphere in anther radius form.
	2nd	General equation of a sphere.
	3rd	Condition to become a sphere.

	4th	Finding out radius and center of a sphere.
	5th	Equation of a sphere with condition.
15th	1st	Sphere of equation with under a line
	2nd	Equation of a sphere with end point of a diameter.
	3rd	Solving problem with condition.
	4th	Solving problem with condition.
	5th	Solving problem with condition.


 Jayak
 16.08.23

 Pande
 16/08/23
 Signature of faculty


 Signature of HOD
 16.08.2023