Lesson plan of 2022-23
(1st SEMESTER)

DISCIPLINE:	SEMESTER:1st	NAME OF THE TEACHING FACULTY: Mousumi Jena
SUBJECT: Engineering Mathematics-I	NO.OF DAYS/PER WEEK CLASS ALLOTTED: 5 + 1 (TUT)	SEMESTER FROM DATE: 25/10/22 To 20/02/23 NO.OF WEEKS:15
WEEK	CLASS DAY	THEORY/PRACTICAL TOPICS 1) MATRICES AND DETERMINANTS
1ST	1ST	a) Types of matrices
	2ND	b) Algebra of matrices
	3RD	c) Determinant
	4TH	d) Properties of determinant
	5 TH	e) Inverse of a matrix (second and third order)
	6TH	(Question should be on second order matrix)
2ND	1ST	f) Cramer's Rule (Question should be on two variables)
	2ND	g) Solution of simultaneous equations by matrix inverse method
	3RD	(Question should be on two variables)
	4TH	2) TRIGONOMETRY
	5TH	a) introduction to trigonometry
	6TH	a) Trigonometrical ratios
3RD	1ST	b) Compound angles
	2ND	c) multiple and sub-multiple angles (only formulae)
	3RD	d) c) Define inverse circular functions
	4TH	e) its properties (no derivation)
	5th	f)problems based on using properties
	6^th	g)class notes checking
4TH	1ST	Tutorial class
	2ND	3) CO-ORDINATE GEOMETRY IN TWO DIMENSIONS (Straight line)
	3RD	a) Introduction of geometry in two dimension
	4TH	b) Distance formulae, division formulae
	5TH	c)area of a triangle (only formulae no derivation)
	6TH	d) Define slope of a line, angle between two lines (only F),
5TH	1ST	e)condition of perpendicularity and parallelism.
	2ND	f) Different forms of straight lines (only formulae)
	3RD	g) i) One point form (ii) two point form
	4TH	h) iii) slope form (iv) intercept form (v) Perpendicular form
	5TH	i)Equation of a line passing through a point
	6th	J) (i) parallel to a line (ii) Perpendicular to a line
6TH	1ST	k) Equation of a line passing through the intersection of two lines
	2ND	l) Distance of a point from a line
	3RD	Problems based on this
	4TH	Doubt clearing class
	5^th	Tutorials class

	6TH	Note checking
7TH	1ST	**4) CIRCLE**
	2ND	a)Introduction to circle
	3RD	b) Equation of a circle
	4TH	c) radius
	5Th	d)center
8TH	1ST	d) i) center radius form
	2ND	e) (ii) general equation of a circle
	3RD	f)diameter concept
	4TH	g) (iii) end point of diameter form
	5TH	Problems based on this
9TH	1ST	**5) CO-ORDINATE GEOMETRY IN THREE DIMENSIONS**
	2ND	a)concept about geometry in 3-d
	3RD	b)idea about co ordinates
	4TH	C) a) Distance formulae,
	5TH	section formulae
10TH	1ST	d) direction ratio, direction cosine
	2ND	e) angle between two lines
	3RD	f) condition of parallelism and perpendicularity
	4TH	g) Equation of a plane
11TH	1ST	h) i) General form, angle between two planes
	2ND	i) perpendicular distance of a point from a plane
	3RD	j) equation of a plane passing through a point
	4TH	k) i) parallel to a plane (ii) perpendicular to a plane
12TH	1ST	l)practices of problems
	2ND	l)doubt clearing class
	3RD	m)tutorials
	4TH	n)checking of notes
13TH	1ST	0)extra classes
	2ND	**6) SPHERE**
	3RD	a) Equation of a sphere
	4TH	b)concept of radius and center
14TH	1ST	c) i) center radius form
	2ND	d) ii) general form
	3RD	e) iii) two end points of a diameter form
	4TH	f) (only formulae and problems)
15TH	1ST	g)practice problems over it
	2ND	h)tutorials
	3RD	i)checking of notes
	4TH	j) doubt clearing class

Mousumi Jena
25.10.2022
SIGNATURE OF THE FACULTY

25/10/2022
SIGNATURE OF HOD