

LESSON PLAN

DEPARTMENT: MATHEMATICS AND SCIENCE

BHUBANANANDA ORISSA SCHOOL OF ENGINEERING, CUTTACK

ACADEMIC SESSION:-2021-22

SEMESTER: - 1ST SEM. WINTER-2021

SUBJECT: - ENGINEERING MATHEMATICS-I

Discipline: (All Branch) MECHANICAL	Semester: 1 st Semester	Name of the Teaching Faculty: SUNANDA MOHAPATRA
Subject:	No. of Days/	Semester From: - Date: 25 / 10 / 2021 to 31/
Engineering Mathematics-I	per week class allotted (Mon, Tue, Wed, Thu, Fri,	01/2022
iviatileillatics-i	Sat)	No of Weeks: - 15
Week	Class days & Dates	Theory Topics
1 st		1) MATRICES AND DETERMINANTS
	25.10.21	a) Types of matrices
	26.10.21	b) Algebra of matrices
	27.10.21	c) Determinant
	28.10.21	d) Properties of determinant
		Problem of above
	29.10.21	
2nd	30.10.21	1) MATRICES AND DETERMINANTS
	1.11.21	e) Inverse of a matrix
		(second and third order)
	2.11.21	Problem on second order matrix only
	3.11.21	Problem on Second order matrix only
	5.11.21	
	6.11.21	
3 rd		1) MATRICES AND DETERMINANTS
	8.11.21	f) Cramer's Rule (Question should be on two variables)
	9.11.21	
	10.11.21	g) Solution of simultaneous equations by matrix inverse method (Question should be on two variables)
	11.11.21 12.11.21	Problem of above
	13.11.21	CLASS TEST-1
4 th		2) TRIGONOMETRY
4		a) Trigonometric ratios
	15.11.21 16.11.21	b) Compound angles, multiple and sub-multiple angles (only
	17.11.21	formulae)
	18.11.21 20.11.21	Problem of above
5 th	22.11.21	2) TRIGONOMETRY

	23.11.21	c) Define inverse circular functions and its
	24.11.21	managhina (na daginatian)
	25.11.21	properties (no derivation)
	26.11.21	Problem of above
	27.11.21	CASSS TEST -2
6 th		2) TRIGONOMETRY
	29.11.21	c) Define inverse circular functions and its properties (no
	30.11.21	derivation)
	1.12.21	
	2.12.21	Problem of above
	3.12.21	
	4.12.21	
7 th	4.12.21	2) CO ODDINATE CEONAETDY IN TIMO DINAENCIONIC
\		3) CO-ORDINATE GEOMETRY IN TWO DIMENSIONS
	6 12 24	(Straight line)
	6.12.21	a) Introduction of geometry in two dimension
	7.12.21	b) Distance formulae, division formulae, area of a triangle (only
	0.43.34	formulae no derivation)
	8.12.21	c) Define slope of a line, angle between two lines (only F),
		condition of perpendicularity and parallelism.
	9.12.21	d) Different forms of straight lines (only formulae)
		i) One point form
		(ii) two point form
		(iii) slope form
		(iv) intercept form
		(v) Perpendicular form
	10.12.21	Problem of above
	11.12.21	
8 th		3) CO-ORDINATE GEOMETRY IN TWO DIMENSIONS
	13.12.21	e) Equation of a line passing through a point and (i) parallel to a
		line (ii) Perpendicular to a line
	14.12.21	f) Equation of a line passing through the intersection of two
		lines
	15.21.21	a) Distance of a control of
		g) Distance of a point from a line
	16.12.21	Problem of above
	17.12.21	
	18.12.21	
9 th		4) CIRCLE
	20.12.21	a) Equation of a circle
	21.12.21	2, 2422220000000000000000000000000000000
	22.12.21	(i) centre radius form
	23.12.21	(1) certai e radias torrir
	24.12.21	(ii) general equation of a circle
	24.12.21	Problem of above
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10th 27.12.21 4) CIRCLE (iii) end point of diameter form Problem on circle 28.12.21 CLASS TEST-3 S) CO-ORDINATE GEOMETRY IN THREE DIMENSIONS a) Distance formulae, section formulae, direction ratio, direction cosine, angle between two lines (condition of parallelism and perpendicularity) 1.01.22 Problem of above 1.01.22	
S) CO-ORDINATE GEOMETRY IN THREE DIMENSIONS a) Distance formulae, section formulae, direction ratio, direction cosine, angle between two lines (condition of parallelism and perpendicularity) 1.01.22 Problem of above 11th S) CO-ORDINATE GEOMETRY IN THREE DIMENSIONS b) Equation of a plane 4.1.22 i) General form angle between two planes 7.1.21 angle between two planes Problem of above 12th S) CO-ORDINATE GEOMETRY IN THREE DIMENSIONS perpendicular distance of a point from a plane equation plane passing through a point and i) parallel to a plane (ii) perpendicular to a plane Problem of above 15.1.22 QUIZ TEST 13th G) SPHERE a) Equation of a sphere i) centre radius form ii) general form iii) general form iii) two end points of a diameter form (only formulae problems problems Problem of above	
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25.1.22 Revision	
26.1.22 Exam related problem practice	
27.1.22	
28.1.22	
29.1.22	
15 th 31.1.22 VST FOR SEMESTER EXAM	

BOOK REFERENCE: ENG. MATHEMATICS-I, KP, MATH BOOK BY NCERT, ELEMENTS OF MATHEMATICS.ODISHA STATE BUREAU