



LESSON PLAN

DEPARTMENT: MATHEMATICS AND SCIENCE

BHUBANANANDA ORISSA SCHOOL OF ENGINEERING, CUTTACK

ACADEMIC SESSION:-2023-24

SEMESTER: - 1ST SEM WINTER-2023

SUBJECT: - ENGINEERING MATHEMATICS-I

SECTION: -D/BRANCH:-ELECTRICAL

Prepared by:-

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B. Jena
14/08/2023
H.O.D. (Maths) (Sc)

DISCIPLINE /BRANCH : ELECTRICAL (SEC: D)	SEMESTER:1ST	NAME OF THE TEACHING FACULTY: SARADA PRASAD JENA
SUBJECT: ENGINEERING MATHEMATICS -I	NO. OF DAYS/PER WEEK CLASS ALLOTTED:06 (MON,TUE,WED,THU,FRI,SAT)	SEMESTER FROM:Date:16/08/2023 to 11/12/2023
WEEK	CLASS DAYS & DATES	THEORY TOPICS
1st	16/08/223	Introduction Engineering mathematics applications, syllabus discussion, question pattern
	17/08/23	1) MATRICES AND DETERMINANTS Definition, Construction of matrix ,elements, order
	18/08/23	a) Types of matrices
	19/08/23	TUTORIAL CLASS:- Problem discussion on matrix
	21/08/223	b) Algebra of matrices
2nd	22/08/23	1) MATRICES AND DETERMINANT 2) Matrix multiplication
	23/08/23	Problem discussion about matrix multiplication
	24/08/23	Minor Of A Matrix
	25/08/23	Cofactor Of A Matrix
	26/08/23	TUTORIAL CLASS:- Problem discussion on Determinant
	28/08/23	Problem of above
	29/08/23	Inverse of a matrix
3rd		

4 th		(second and third order) Problem on second order matrix only
	31/08/23	Problem of above
	01/09/23	System of linear equation
	02/09/23	TUTORIAL CLASS:- Question should be on two variables
	04/09/23	1) MATRICES AND DETERMINANT
		c) Determinant
	05/09/23	1) MATRICES AND DETERMINANTS
		d) Properties of determinant
	07/09/23	Properties of determinant continue.
	08/09/23	Problem of above
5 th	09/09/23	TUTORIAL CLASS:- Doubt clearing class of trigonometry
	11/09/23	1) MATRICES AND DETERMINANTS
		g) Solution of simultaneous equations by matrix inverse method
	12/09/23	Problem of above
	13/09/23	Cramer's rule
		(second and third order)
	14/09/23	Problem of above
	15/09/23	CLASSTEST-1
	16/09/23	TUTORIAL CLASS:- Doubt clearing class of Determinant(Cramer's rule)
	18/09/23	Introduction
6 th		

		General equation of circle a) End points of diameter Trigonometry ratios
	21/09/23	2) TRIGONOMETRY b) Compound angles multiple and sub-multiple angles (only formulae)
	22/09/23	Problem of above
	23/09/23	TUTORIAL CLASS:- Problem discussion on Compound Angles
7 th	25/09/23	c) Define inverse circular(Trigonometric) functions , Domain & Range Problem on it.
	26/09/23	Problem of above
	27/09/23	Inverse circular function properties (no derivation)
	28/09/23	Problem of above
	30/09/23	TUTORIAL CLASS:- Problem discussion on above
8 th	03/10/23	Inverse circular (Trigonometric) function properties (no derivation)
	04/10/23	Problem of above
	05/10/23	Short type problem of Trigonometry
	06/10/23	Doubt clearing class of trigonometry
	07/10/23	TUTORIAL CLASS:- CLASS TEST-2
9 th	09/10/23	3) CO-ORDINATE GEOMETRY IN TWO DIMENSIONS (Straight line) a) Introduction of geometry in two dimension

	10/10/23	b) Distance formulae, division formulae, area of a triangle (only formulae no derivation)
	11/10/23	Problem of above
	12/10/23	c) Define slope of a line, angle between two lines (only F), condition of perpendicularity and parallelism.
	13/10/23	Problem of above
	14/10/23	TUTORIAL CLASS:- Doubt clearing class of co-ordinate geometry
10 th	16/10/23	d) Different forms of straight lines (only formulae) i) One point form
	17/10/23	Problem of above
	18/10/23	(ii) two point form (iii) slope form
	19/10/23	Problem of above
	20/10/23	iv) intercept form
	30/10/23	(v) Perpendicular form Problem of above
11 th	31/10/23	Problem of above (TUTORIAL CLASS)
	01/11/23	3) CO-ORDINATE GEOMETRY IN TWO DIMENSIONS e) Equation of a line passing through a point and (i) parallel to a line
	02/11/23	Problem of above
	03/11/23	(ii) Perpendicular to a line
	04/11/23	TUTORIAL CLASS:- Problem discussion on above
	06/11/23	f) Equation of a line passing through the intersection of two lines
12 th	07/11/23	g) Distance of a point from a line

13 th	08/11/23	Equation of circle
	09/11/23	Centre radius form
	10/11/23	General equation of circle
		End points of diameter
	11/11/23	TUTORIAL CLASS:- Problem discussion on above
	13/11/23	CLASS TEST-3
	14/11/23	5) CO-ORDINATE GEOMETRY IN THREE DIMENSIONS
		a) Distance formulae, section formulae
	15/11/23	Problem of above
	16/11/23	5) CO-ORDINATE GEOMETRY IN THREE DIMENSION
		Discuss on direction ratio, direction cosine.
	17/11/23	Problem of above
	18/11/23	TUTORIAL CLASS:- Problem discussion on above
14 th	20/11/23	5) CO-ORDINATE GEOMETRY IN THREE DIMENSIONS
		angle between two lines (condition of parallelism and perpendicularity)
	21/11/23	Problem of above
	22/11/23	b) Equation of a plane
		i) General form
	23/11/23	Problem of above
	24/11/23	angle between two planes

	25/11/23	TUTORIAL CLASS:- Doubt clearing class of co-ordinate geometry(3D)
15 th	28/11/23	Problem of above
	29/11/23	perpendicular distance of a point from a plane equation of a plane passing through a point and parallel to a plane
	30/11/23	Problem of above
	01/12/23	perpendicular distance of a point from a plane equation of a plane passing through a point and perpendicular to a plane
	02/12/23	TUTORIAL CLASS:- Problem discussion on above
16 th	04/12/23	Equation of sphere Centre-radius form
	05/12/23	General equation of sphere End points of diameter
	06/12/23	CLASS TEST-4
	07/12/23	Exam related problem practice unit-1
	08/12/23	Exam related problem practice unit-2
	09/12/23	Exam related problem practice unit-3
17 th	11/12/23	VST-1

PRESCRIBE BOOK:
 ELEMENTS OF MATHEMATICS VOL-I
 (ODISHA STATE BUREAU OF TEXT BOOK PREPARATION & PRODUCTION, PUSTAK BHAVAN,BBSR)
 MY BOOK REFERENCE:
 ENGINEERING MATHEMATICS-I
 (KALYANI PUBLICATION)