SUDDHANANDA ENGNEERING AND RESEARCH CENTER, BBSR

LESSION PLAN

Discipline: ALL	Semester: 1st	Name of the teaching Faculty: Fakir Maharana, Lecturer in Mathematics
Subject: **TH3: ENGINEERING MATHEMATICS-I**	Number of Days/per week class allotted: 5 (5 Lecture)	

Sl no	Week	Class	Chapter	Detailed topic to be covered	Remark
1	1st	Class 1	Chapter 1 Algebra MATRICES AND DETERMINANTS (18 periods)	a) Types of matrices b) Algebra of matrices	
2		Class 2		Problem Solving and Tutorials	
3		Class 3		c) Determinant d) Properties of determinant	
4		Class 4		Problem Solving and Tutorials	
5		Class 5		Problem Solving and Tutorials	
6	2nd	Class 1		Problem Solving and Tutorials	
7		Class 2		Problem Solving and Tutorials	
8		Class 3		e) Inverse of a matrix (second and third order) (Question should be on second order matrix)	
9		Class 4		Problem Solving and Tutorials	
10		Class 5		Problem Solving and Tutorials	
11	3rd	Class 1		f) Cramer's Rule (Question should be on two variables)	
12		Class 2		Problem Solving and Tutorials	
13		Class 3		Problem Solving and Tutorials	
14		Class 4		Problem Solving and Tutorials	
15		Class 5		g) Solution of simultaneous equations by matrix inverse method (Question should be on two variables)	
16	4th	Class 1		Problem Solving and Tutorials	
17		Class 2		Problem Solving and Tutorials	
18		Class 3		Problem Solving and Tutorials	
19		Class 4	Chapter 2 Trigonometry (15 Periods)	a) Trigonometrical ratios	
20		Class 5		Problem Solving and Tutorials	
21	5th	Class 1		b) Compound angles, multiple and sub-multiple angles (only formulae)	
22		Class 2		Problem Solving and Tutorials	
23		Class 3		Problem Solving and Tutorials	
24		Class 4		Problem Solving and Tutorials	
25		Class 5		c) Define inverse circular functions and its properties (no derivation)	

26	6th	Class 1		Problem Solving and Tutorials	
27		Class 2		Problem Solving and Tutorials	
28		Class 3		Problem Solving and Tutorials	
29		Class 4		Problem Solving and Tutorials	
30		Class 5		Problem Solving and Tutorials	
31	7th	Class 1		Problem Solving and Tutorials	
32		Class 2		Problem Solving and Tutorials	
33		Class 3		Problem Solving and Tutorials	
34		Class 4	Chapter-3 Two Dimensional Geometry Co-ordinate Geometry in Two Dimensions (Straight Line) 13 Periods	a) Introduction of geometry in two dimension b) Distance formulae, division formulae, area of a triangle (only formulae no derivation)	
35		Class 5		Problem Solving and Tutorials	
36	8th	Class 1		c) Define slope of a line, angle between two lines (only Formulae), condition of perpendicularity and parallelism.	
37		Class 2		Problem Solving and Tutorials	
38		Class 3		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	
39		Class 4		Problem Solving and Tutorials	
40		Class 5		Problem Solving and Tutorials	
41	9th	Class 1		e) Equation of a line passing through a point and (i) parallel to a line (ii) Perpendicular to a line	
42		Class 2		Problem Solving and Tutorials	
43		Class 3		f) Equation of a line passing through the intersection of two lines	
44		Class 4		Problem Solving and Tutorials	
45		Class 5		g) Distance of a point from a line	
46	10th	Class 1		Problem Solving and Tutorials	
47		Class 2	Chapter 4 Two Dimensional Geometry CO-ORDINATE GEOMETRY IN TWO DIMENSIONS (Circle) 07 Periods	Introduction to Circle	
48		Class 3		a) Equation of a circle (i) center radius form	
49		Class 4		Problem Solving and Tutorials	
50		Class 5		(ii) general equation of a circle	
51	11th	Class 1		Problem Solving and Tutorials	
52		Class 2		(iii) end point of diameter form	
53		Class 3		Problem Solving and Tutorials	
54		Class 4	Chapter 5 Three Dimensional Geometry	a) Distance formulae, section formulae in 3D	
55		Class 5		Problem Solving and Tutorials	
56	12th	Class 1		Direction ratio, direction cosine, angle between two lines	
57		Class 2		Problem Solving and Tutorials	
58		Class 3		condition of parallelism and perpendicularity	
59		Class 4		Problem Solving and Tutorials	
60		Class 5		Problem Solving and Tutorials	
61		Class 1		b) Equation of a plane i) General form	

62	13th	Class 2	Co-ordinate Geometry in Three Dimensions (15 Periods)	Problem Solving and Tutorials	
63		Class 3		Angle between two planes, perpendicular distance of a point from a plane	
64		Class 4		Problem Solving and Tutorials	
65		Class 5		Equation of a plane passing through a point and i) parallel to a plane (ii) perpendicular to a plane	
66	14th	Class 1		Problem Solving and Tutorials	
67		Class 2		Problem Solving and Tutorials	
68		Class 3		Problem Solving and Tutorials	
69		Class 4	Chapter 6 Three Dimensional Geometry Co-ordinate Geometry in Three Dimensions (Sphere) 07 Periods	Introduction to Sphere a) General Equation of a sphere	
70		Class 5		Problem Solving and Tutorials	
71	15th	Class 1		i) Equation of Sphere in center radius form ii) Equation of Sphere in General form	
72		Class 2		Problem Solving and Tutorials	
73		Class 3		iii) Equation of Sphere in two end points of a diameter form (only formulae and problems)	
74		Class 4		Problem Solving and Tutorials	
75		Class 5		Problem Solving and Tutorials	