

GANDHI INSTITUTE OF TEHCNOLOGY AND MANAGEMENT

Lesson Plan

Name of the Program	Diploma in MechanicalEngineering			
Course Name	ENGINEERING MATHEMATICS -I	Course Code	C103	
Course Year	1ST	Semester	1st	Academic Period
No. of Classes allotted per Week		05	Planned Classes Required to Complete the Course	
			60	

Sl. No.	Topics to be covered	Module	No. of hours Required	Mode of Teaching
1	Types of matrices	I	01	LM/ IM
2	Algebra of matrices	I	01	LM/ IM
3	Determinant	I	01	LM/ IM
4	Properties of determinant	I	01	LM/ IM/ ICT
5	Inverse of a matrix of second order	I	01	LM/ IM
6	Inverse of a matrix of third order	I	01	LM/ IM
7	Problems on adjoint and inverse of a matrix	I	01	LM/IM
8	Cramer's Rule of second order matrix	I	01	LM/ IM
9	Solution of simultaneous equations by matrix inverse method	I	01	LM/ IM/ ICT
10	Problems on Cramer's rule and solution of system of linear equation by matrix inverse method	I	02	LM/IM
11	Trigonometrical ratios	II	02	LM/ IM
12	Compound angles(only formulae)	II	01	LM/ IM
13	Multiple angles(only formulae)	II	01	LM/ IM
14	Sub-multiple angles(only formulae)	II	01	LM/ IM
15	Inverse circular functions	II	02	LM/ IM
16	Properties of inverse circular functions	II	01	LM/ IM
17	Introduction of geometry in two dimension	III	01	LM/ IM
18	Distance formulae in two dimension	III	01	LM/ IM/ ICT
19	Division formulae in two dimension	III	02	LM/ IM
20	Area of a triangle in two dimension	III	01	LM/ IM/ ICT
21	Definition of slope of a line	III	01	LM/ IM
22	Angle between two lines	III	01	LM/ IM

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23	Condition of perpendicularity and parallelism	III	02	LM/ IM
24	Different forms of straight lines	III	01	LM/ IM/ ICT
25	One point form of straight lines	III	01	LM/ IM
26	Two point form of straight lines	III	01	LM/ IM
27	Slope form of straight lines	III	01	LM/ IM
28	Intercept form of straight lines	III	01	LM/ IM/ ICT
29	Perpendicular form of straight lines	III	01	LM/ IM
30	Equation of a line passing through a point and parallel to a line	III	02	LM/ IM
31	Equation of a line passing through a point and Perpendicular to a line	III	01	LM/ IM
32	Equation of a line passing through the intersection of two lines	III	01	LM/ IM/ ICT
33	Problems on equation of line	III	02	LM/IM
34	Distance of a point from a line	III	01	LM/ IM
35	Equation of a circle of centre radius form	IV	01	LM/ IM
36	General equation of a circle	IV	01	LM/ IM
37	End point of diameter form	IV	01	LM/ IM/ ICT
38	Distance formulae in three dimension	V	01	LM/ IM
39	Section formulae in three dimension	V	02	LM/ IM
40	Direction ratio	V	01	LM/ IM/ ICT
41	Direction cosine	V	01	LM/ IM
42	Angle between two lines (condition of parallelism and perpendicularity)	V	02	LM/ IM
43	Equation of a plane in general form	V	01	LM/ IM
44	Angle between two planes	V	01	LM/ IM/ ICT
45	Perpendicular distance of a point from a plane	V	01	LM/ IM
46	Equation of a plane passing through a point and parallel to a plane	V	02	LM/ IM
47	Equation of a plane passing through a point and perpendicular to a plane	V	01	LM/ IM/ ICT
48	Equation of a sphere in centre radius form	VI	01	LM/ IM
49	Equation of a sphere in general form	VI	01	LM/ IM
50	Equation of a sphere in two end points of a diameter form	VI	01	LM/ IM/ ICT

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Signature of the Faculty

Signature of the HoD