Branch: Mechanical Engg.& Electrical l
Subject: Applied Mathematics-II
Teacher: Dr. Shabnam Sharma

Semester: 2nd
Session: March-July 2022

S. No.	No. of Lect.	Chapter/Unit Description	Detail of Contents	Reference Resources	Remarks
1	4	Algebra	Matrix: Algebra of matrices, Inverse of a matrix, matrix inverse method to solve a system of linear equations in 3 variables.	R2	
2	4	Algebra	Det.: Elementary properties of determinants upto 3rd order, consistency of equations, Crammer's rule.	R2	
3	7	Co-ordinate Geometry	Equations of straight line in various standard forms (without proof), intersection of two straight lines, angle between two lines, Parallel and perpendicular lines, perpendicular distance formula	R2	
4	6	Co-ordinate Geometry	General equation of a circle and its characteristics. To find the equation of a circle, given: * Centre and radius* Three points lying on it * Coordinates of end points of a diameter;	R2	
5	7	Co-ordinate Geometry	Def. of conics (Parabola, Ellipse, Hyperbola) their standard Equations without proof. Problems on conics when their foci, directrices and vertices are given.	R2	
6	5	Integral Calculus	Integration as inverse operation of differentiation	R2	
7	5	Integral Calculus	Simple integration by substitution, by parts and by partial fractions (for linear factors only)	R2	
8	5	Integral Calculus	Use of formulas For solving problems where m, n are positive integers	R2	
9	5	Integral Calculus	Applications of integration for: (a) Simple problem on evaluation of area bounded by a curve and axes. (b) Calculation of Volume of a solid formed by revolution of an area about axes.	R2	
10	2	Vector Algebra	Definition notation and rectangular resolution of a vector	R2	
11	2	Vector Algebra	Addition and subtraction of vectors.	R2	
12	2	Vector Algebra	Scalar and vector products of two vectors.	R2	
13	2	Vector Algebra	Simple problems related to work, moment and angular velocity	R2	
14	4	Differential Equations	Solution of first order and first degree differential equation by variable separation method (simple problems). MATLAB – Simple Introduction.	R2	

Reference Resources

R1: Applied Mathematics-II by B.D. Moudgil

R2: Applied Mathematics-II by Satish K. Sharma

Signature of Teacher with Date

(Shabnam Sharma)

Signature of HOD/OIC