UNIT CONTENTS

I MATRICES:
Types of matrices, Addition and subtraction of matrices.
Multiplication of matrices and problems. Adjoint of square matrices and related problems. Inverse of a matrix, inverse matrix with the help of adjoint of matrix and problems.

Solution of simultaneous linear equations by matrix method, application of inverse matrix and problems.

DIFFERENTIAL EQUATIONS:
II Definition of differential equation, order and degree of differential equations, problems. Solution of differential equation, differential equation of first order and first-degree problems. Variable separable form.

HOMOGENEOUS & LINEAR DIFFERENTIAL EQUATIONS:
III Homogeneous differential equation, reducible to homogeneous form. Linear differential equation and equations reducible to linear.

dy/dx + Py = Qy^n form and problems.

EXACT DIFFERENTIAL EQUATIONS:
IV Exact differential equations and equations reducible to exact form and problems.
Simple application and related problems.

V LAPLACE TRANSFORM:
Definition and notations, important formulae, properties of Laplac’s transformation, shifting theorems, Inverse Laplac’s transformation.

BOOK RECOMMENDED
1. Applied Mathematics by Prof. V.K. Parashar
2. Applied Mathematics (Vol-I & II) by R.D. Sharma