

CONTENTS

(I)

LAPLACE TRANSFORMS, MATRICES, ORDINARY DIFFERENTIAL EQUATIONS AND PARTIAL DIFFERENTIAL EQUATIONS (Thesaurus 1)

Laplace Transforms (Part I)

Chapter	Title of the Chapter	Page Numbers
Chapter 1	The Laplace Transform	1-5
Chapter 2	The Inverse Laplace Transform	6-8
Chapter 3	Applications of Laplace Transforms to Differential Equations	9-14
	Bibliography	130-133
	Index	135-138

* Important Note: Examples are skipped from this book.

Matrices (Part II)

Chapter	Title of the Chapter	Page Numbers
Chapter 1	Algebra of Matrices	15-22
Chapter 2	Determinants	23-26
Chapter 3	Adjoints and Inverses	27-28
Chapter 4	Rank of a Matrix	29-32
Chapter 5	Systems of Linear Equations	33-35
Chapter 6	Vector spaces of n-tuples	36-39
Chapter 7	Unitary space and Euclidean Space	40-42
Chapter 8	Characteristic Roots and Vectors	43-46
Chapter 9	Similarity of Matrices	47-49
Chapter 10	Quadratic Forms	50-56
Chapter 11	Applications to Geometry	57
	Bibliography	130-133
	Index	135-138

* Important Note: Examples are skipped from this book.

(II)**CONTENTS****Ordinary Differential Equations (Part III)**

Chapter	Title of the Chapter	Page Numbers
Chapter 1	Formation of Differential Equations	59
Chapter 2	First Order and First Degree Equations	60-64
Chapter 3	Linear Differential Equations with Constant Coefficients	65-68
Chapter 4	Applications to Geometry and Mechanics	69-70
Chapter 5	Equations of the First Order but not of First Degree	71-72
Chapter 6	Homogeneous Linear Equations	73-74
Chapter 7	Orthogonal Trajectories	75
Chapter 8	Singular Solutions	76
Chapter 9	Linear Equations of the Second Order	77-80
Chapter 10	Simultaneous Differential Equations	81-82
Chapter 11	Total Differential Equations	83-86
Chapter 12	Exact Differential Equations and Equations of Particular Forms	87-89
	Bibliography	130-133
	Index	135-138

* Important Note: Examples are skipped from this book.

Partial Differential Equations (Part IV)

Chapter	Title of the Chapter	Page Numbers
Chapter 1	Derivation of Partial Differential Equations	91-94
Chapter 2	Partial Differential Equations of 1 st Order	95-96
Chapter 3	Non-linear Partial Differential Equations of Order One	97-104
Chapter 4	Homogeneous Linear Partial Differential Equations with Constant Coefficients	105-109
Chapter 5	Non-homogeneous Linear Partial Differential Equations with Constant Coefficients	110-115
Chapter 6	Partial Differential Equations of Order Two with Variable Coefficients	116-123
Chapter 7	Problems On Classified Partial Differential Equations	124
Chapter 8	Monge's Methods	125-129
	Bibliography	130-133
	Index	135-138

* Important Note: Examples are skipped from this book.