

CONTENTS

	Preface	v
CHAPTER I	PARTIAL DIFFERENTIATION	
	1 Functions of several variables: surfaces	1
	2 Partial derivatives	8
	3 Change of variable: chain rule	16
	4 Taylor's series: tangent plane: directional derivatives	24
	5 Differentials: Jacobians	30
CHAPTER II	MAXIMA AND MINIMA	
	6 Functions of two variables	39
	7 Functions of more than two variables	48
	8 Lagrange's method of undetermined multipliers .	53
CHAPTER III	MULTIPLE INTEGRALS	
	9 Double integrals	62
	10 Triple integrals	72
	11 Change of variable in multiple integrals	80
CHAPTER IV	LINE AND SURFACE INTEGRALS	
	12 Line integrals along a plane curve	86
	13 Area of a surface	94
	14 Surface integrals	99
	15 Kelvin's (or Stokes's) theorem	109
CHAPTER V	VECTOR CALCULUS	
	16 Grad, div and curl	115
	17 Integral theorems	126
CHAPTER VI	FOURIER SERIES	
	18 Full-range Fourier series	134
	19 Half-range cosine series	141
	20 Half-range sine series	146
	21 Parseval's theorem	153