

CONTENTS

Chapter No.	Title	Page No.
	Abstract	
	Introduction	1
	Review of Literature	29
1	Preliminary	39
2	δP_S-open sets in topological spaces	52
	2.1 Introduction	52
	2.2 δP_S -open sets	52
	2.3 Subspaces of δP_S -open sets	61
	2.4 δP_S - Closed Sets	62
	2.5 δP_S - Closure and δP_S -Interior	66
3	Some Concepts related to δP_S-open sets	69
	3.1 Introduction	69
	3.2 δP_S -Neighborhood	69
	3.3 δP_S -Limit Point	71
	3.4 δP_S -Frontier	72
	3.5 δP_S -Boundary, δP_S - Exterior, δP_S -Saturated	74
	3.6 δP_S -Open sets via Grill	76
4	Separation Axioms using δP_S-open sets	80
	4.1 Introduction	80
	4.2 Separation Axioms	80

Chapter No.	Title	Page No.
	4.3 Associated Spaces with Separation Axioms and its relation	85
	4.4. δP_S -Compact Spaces	87
	4.5 - δP_S -Sets and δP_S -Compact Subspaces	93
	4.6 Results on Images of δP_S -Compactness	96
5	Some δP_S-Continuous Functions in Topological Spaces	98
	5.1 Introduction	98
	5.2 δP_S - Continuity	98
	5.3 Perfectly δP_S -continuity and Strongly δP_S -continuity	107
	5.4 Quasi δP_S -continuity and Totally δP_S -continuity	109
	5.5 Contra δP_S -Continuous Functions	111
6	Weaker Forms of δP_S-continuity	123
	6.1 Introduction	123
	6.2 Almost δP_S -Continuous Functions	123
	6.3 Weakly δP_S -Continuous Functions	137
7	Various Types of δP_S-Somewhat Continuity	153
	7.1 Introduction	153
	7.2 Somewhat δP_S -Continuous Functions	153
	7.3 Somewhat Almost δP_S -Continuous Functions	153
	7.4 Somewhat δP_S -Irresolute Functions	159
	7.5 Somewhat δP_S -Open Functions	161
	7.6 Somewhat Almost δP_S -Open Functions	164

Chapter No.	Title	Page No.
8	δP_S-Homeomorphisms	167
	8.1 Introduction	167
	8.2 δP_S -Open and Closed Functions	167
	8.3 δP_S -Irresolute Functions	172
	8.4 δP_S -Homeomorphism and $\delta P_S \mathcal{C}$ -Homeomorphism	174
9	(i, j) - δP_S-Open sets in Bitopological Spaces	178
	9.1 Introduction	178
	9.2 (i, j) - δP_S -Open Sets	178
	9.3 Subspaces on Bitopological Spaces	182
	9.4 (i, j) - δP_S -Closed Sets	184
	9.5 Properties on (i, j) - δP_S -Open Sets	186
	9.6 (i, j) - δP_S -Continuous Functions	190
	Summary and Conclusion	200
	Bibliography	202
	Appendices	207
	Publications	235
	Plagiarism Report	
