

ABSTRACT

This thesis provides an exposition of the structure of generalized pseudo-metric spaces (g.p.s.m.s.) ,generalized cone metric spaces (g.c.m.s.) and certain symmetric distance define on Hausedorff spaces .

In chapter 1, we study some basic definitions and fundamental results of related theory of fixed points for keeping the thesis self contained .In this connection, some topological concepts are also included .

In chapter 2, we introduce generalized pseudo-metric space ,study its topological properties and proved that it is T_5 – space, also proved that it is first countable. Moreover, we introduce certain symmetric distance on Hausdorff and first countable topological space, so that by using the symmetric distance ,we are able to establish some fixed point theorems .

In chapter 3,we introduce generalized cone metric space and study its topological properties . Further, we generalize some fixed point theorems of [8] in the setting of generalized cone metric space .

In chapter 4, we generalize some fixed point theorems of [1] in the setting of generalized pseudo-metric space and certain Hausdorff topological spaces by using symmetric distance defined in chapter 2.

Chapter 5 is devoted to study fixed point theorems in generalized M-fuzzy metric spaces .we reproduce some fixed point theorems in different style .