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FIXED POINTS IN MENGER SPACE FOR FAINTLY COMPATIBLE, RECIPROCAL CONTINUOUS AND COMPATIBILITY OF TYPE (K) MAPPINGS

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Abstract: In this paper, the concept of compatibility of type (K) and faintly compatibility in Menger space has been applied to prove a common fixed point theorem for six self-maps which generalizes the result of Jain et al. [3]. We also give examples in support of our result.

Keywords and Phrases: Menger space, Common fixed points, Reciprocal continuous maps, Compatible maps of type (K) and Faintly compatible.

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1. Introduction

The notion of probabilistic metric space (briefly, PM-space) had been coined by Menger [7] in 1942, as a generalization of metric space. Such a probabilistic generalization of metric spaces appears to be well adapted for the investigation of physical quantities and physiological thresholds. It is also of fundamental importance in probabilistic functional analysis. A common fixed point theorem is a statement containing a set of conditions sufficient to ensure the existence of a