International J. of Math. Sci. & Engg. Appls. (IJMSEA)
ISSN 0973-9424, Vol. 4 No. V (December, 2010), pp. 173-179

COMMON FIXED POINT THEOREMS FOR FOUR R-WEAKLY COMPATIBLE MAPPINGS IN FUZZY METRIC SPACE

RAJESH SHRIVASTAVA, KAILASH KUMAR NAMDEO, MANOJ SHARMA AND MANAVI KOHLI

Abstract

Ever since the notion of fuzzy set was introduced by Zadeh [12] in 1965, the concept of fuzzy metric space was introduced by various authors in different directions. Especially, Deng [1], Erceg [2], Kaleva and Seikkala [5], Karmosil and Michalek [6] have introduced the concept of fuzzy metric space in difierent ways. George and Veeramani [3] modified the concept of fuzzy metric spaces in the sense of Karmosil and Michalek [6] and defined the Hausdor topology of fuzzy metric spaces. Consequently they showed every metric induces a fuzzy metric. Mishra, Sharma and Singh [9] also proved some fixed point theorems in fuzzy metric spaces. Sushil Sharma [13] proved common fixed point theorems for six mappings. In this paper we define a generalized contractive condition for a self mapping with respect to another and establish the existence of coincidence point. Further we deduce a weak contractive condition for the existence of fixed point for single mapping. We begin with some definitions and preliminary concepts.

Ascent Publication House: http:// www.ascent-journals.com