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NEW TRIPLED FIXED POINT THEOREMS IN CONE METRIC SPACE

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Abstract: We prove some tripled fixed point theorems on Cone Metric Space. Our results generalise the fixed point results due to Erdal Karapinar [E. Karapinar, Couple Fixed Point on Cone Metric Space, GU. J. Sci. 24(1): 51-58(2011)].

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1. Introduction

Bhaskar and Lakshmikanthan [3] proved the existence of a new fixed point theorem for a mixed monotone mapping in a metric space with the help of partial order, using a weak contractivity type of assumption. They named this new type of fixed point as coupled fixed point. Since then this new concept is extended and used in various directions. This concept is extended to tripled fixed point by Berinde and Borcut [2]. They obtained the existence and uniqueness theorems for contractive mappings in partially ordered complete metric spaces. This concept is extended to quadrupled fixed point by Karapinar [9].

The concept of cone metric space introduced by Huang and Zang [7] in 2007 as generalizations of metric space. They generalized metric space by replacing the