

COMMON FIXED POINT THEOREMS FOR THREE SELF MAPPINGS IN BICOMPLEX VALUED METRIC SPACES

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(Received: Aug. 20, 2020 Accepted: Feb. 14, 2021 Published: Apr. 30, 2021)

Abstract: In the paper we prove some common fixed point theorems for three self mappings in a bicomplex valued metric spaces. Our results generalize the literature due to Azam *et al.* (2011) & Sintunavarat & Kumam (2012) by using both the ideas of two weakly compatible mappings and rational contractions for a pair of mappings in bicomplex valued metric space.

Keywords and Phrases: Bicomplex valued metric space, compatible mappings, common fixed point, weakly compatible mapping, expansive metric space.

2020 Mathematics Subject Classification: 47H09, 47H10, 46N99, 54H25.

1. Introduction and Preliminaries

During the last fifty years, fixed point theories in complex valued metric spaces are emerging areas of works in the field of the complex as well as functional analysis. Banach's fixed point theorem plays a major role in the fixed point theory. It