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NEW GENERALIZED $\alpha - \psi-$GERAGHTY CONTRACTION TYPE MAPS AND FIXED POINTS

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Abstract: In this paper, we introduce the notion of new generalized $\alpha - \psi-$ Geraghty contraction type maps in the context of metric space and establish some fixed point theorems for such maps. This new contraction map is motivated by the different Geraghty contraction type maps introduced by many authors over the years. An example is also given to illustrate our result.

Keywords and Phrases: Metric space, fixed point, generalized $\alpha-$Geraghty contraction type map, generalized $\alpha - \psi-$Geraghty contraction type map, extended generalized $\alpha - \psi-$Geraghty contraction type map, new generalized $\alpha - \psi-$Geraghty contraction type map.

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1. Introduction

In 1973, Geraghty [5] generalized the Banach contraction principle in the setting of a complete metric space by considering an auxiliary function. This important