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FUZZY CONTRA $\theta g'''$-CLOSED MAPS, $\theta g'''$-OPEN MAPS AND $\theta g'''$-HOMEOMORPHISM IN FUZZY TOPOLOGICAL SPACES

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Abstract: In this paper we introduce a new class of maps namely $fcta\theta g'''C$ maps, $fc\theta g'''O$ maps, $fcg'''\theta C$ maps, $fcg'''\theta O$ maps, $fc\theta g'''$-homeomorphism and $fcg'''\theta$-homeomorphism in fts's. Some of their properties have been investigated.

Keywords and Phrases: $fcta\theta g'''C$, $fctag'''\theta C$, $fcta\theta g'''O$, $fctag'''\theta O$, $fctag'''\theta$-Hom, $fcta\theta g'''$-Hom, $fctag'''_\alpha\theta$-Hom.

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1. Introduction and Preliminaries

As a generalisation of closed sets, Levine [14] developed generalised closed sets (g-closed sets) in general topology. Introducing and analysing g-closed maps by Malghan in 1984 [15] and g-continuous maps by Balachandran et al. [2] in 1991 enhanced various results in general topology by applying the notions of g-closed sets in general topological spaces. Gnanambal [11] proposed and explored generalised preregular closed sets and generalised preregular continuous maps for generic topological spaces in 1997.

(U, τ) or simply U refers to fuzzy topological space (abbreviated as fts) in this study. Here we recall various definitions from these papers, "fuzzy θ-closure of λ [9],