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PREOPEN SETS IN BISPACES

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Abstract: The notion of preopen sets and precontinuity in a topological space was introduced by Mashhour et. al in 1982 [13]. Later the same was studied in a bitopological space in [7] and [9]. Here we have studied the idea of pairwise preopen sets (semi preopen) and pairwise precontinuity (semi precontinuity) in a more general structure of a bispace and investigate how far several results as valid in a bitopological space are affected in a bispace.

Keywords and Phrases: Bispace, preopen sets, pairwise preopen sets, semi preopen sets, pairwise semi preopen sets, precontinuity, semi precontinuity.

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1. Introduction

The notion of topological space was generalized to a bitopological space by J. C. Kelly [8] in 1963. Levine [12] introduced the idea of semi open sets and semi continuity and Mashhour et al. [13] introduced the concept of preopen sets and precontinuity in a topological space. Many works of generalization on bitopological spaces have been seen in [5], [14], [15] etc. Jelic [6] generalized the idea of preopen sets and precontinuity in bitopological space. Later Khedr et al.[9] and A.Kar et al. [7] further studied the same in a bitopological space.

The idea of a topological space was generalized to a σ-space (or simply space) by A. D. Alexandroff [1] in 1940 weakening the union requirements where only contable union of open sets were taken to be open. Later Lahiri and Das [11] gave the idea of a bispace generalizing the notion of bitopological spaces. The concept of semi