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SOME BITOPOLOGICAL SEPARATION AXIOMS USING Q*- OPEN SETS

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Abstract. In this paper , we introduce pairwise Q* - H_i - spaces , ($i = 0, 1, 2$) and pairwise Q* - U_i - Spaces ($i = 0, 1$) in topological spaces and study its properties .

1. Introduction

Separation axioms are properties by which the topology on a space X separates points from points, points from closed sets and closed sets from each other. The various separation axioms give rise to a sequence of successively stronger requirements, which are put upon the topology of a space to separate varying types of subsets.

In 1963, Levine [12] introduced the concept of semi - open sets. Since then , a considerable number of papers discussing separation axioms, essentially by replacing open sets by semi-open sets, have appeared in the literature. For instance, Maheshwari and Prasad introduced semi-T_0, semi-T_1, semi-T_2, s - normality and s - regularity as a generalization of T_0, T_1, T_2 , regularity and normality axioms respectively, and investigated their properties . The notion of semi-open sets was used by Maheshwari and Prasad to introduce pairwise semi-T_0, pairwise semi-T_1, pairwise semi-T_2, pairwise s - regular and pairwise s-normal spaces .Moreover , s - normal (resp. semi normal) spaces were introduced and studied by Maheshwari and Prasad [14] (resp. Dorsett [9]). The notion of Q* - open sets in a topological space was introduced by Murugalingam and Lalitha[19, 20].

Throughout this paper X and Y always represent nonempty bitopological spaces (X, τ_1, τ_2) and (Y, σ_1, σ_2). In this paper , we introduce pairwise Q* - H_i - spaces , (i = 0, 1, 2) and pairwise Q* - U_i - Spaces (i = 0, 1) in bitopological spaces and study its properties.

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