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b-$\mathcal{H}_\sigma$-OPEN SETS IN HGTS

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Abstract. In this paper, we introduce and study the new types of sets in hereditary generalized topological space. Also, we obtained decompositions of (μ, λ)-continuity.

1. Introduction and Preliminaries

In the year 2002, Csaszar [6] introduced very usefull notions of generalized topology and generalized continuity. Consider Z be a nonempty set and μ be a collection from the subsets of Z. Then μ is called a *generalized topology* (briefly GT) if $\emptyset \in \mu$ and an arbitrary union of elements from μ belongs to μ. The main purpose of this paper is to establish some new decompositions of (μ, λ)-continuous functions. Fistly, we introduce a new class of sets called b-$\mathcal{H}_\sigma$-open sets. Properties and the relationships of b-$\mathcal{H}_\sigma$-open sets are investigated. On the other hand, we introduce the notions of π^*-B-$\mathcal{H}_\sigma$-sets, α^*-B-$\mathcal{H}_\sigma$-sets and σ^*-B-$\mathcal{H}_\sigma$-sets. Finally, we obtain some new decompositions of (μ, λ)-continuous functions via these new concepts. A space Z is called a C_0-space [20], if $C_0 = Z$, where C_0 is the set of all representative elements of sets of μ. A subset L of a space (Z, μ) is called asμ-α-*open* [8] (resp. μ-σ-open [8], μ-π-open [8], μ-β-open [8], μ-b-open [19], μ-t-set [15], μ-t^*-set [15]), if $L \subset i_\mu c_\mu i_\mu(L)$ (resp. $L \subset c_\mu i_\mu(L)$, $L \subset i_\mu c_\mu(L)$, $L \subset c_\mu i_\mu c_\mu(L)$, $L \subset c_\mu i_\mu(L) \cup i_\mu c_\mu(L)$, $i_\mu c_\mu(L) = i_\mu(L)$, $i_\mu c_\mu i_\mu(L) = i_\mu(L)$). A subset L of Z is μ-locally closed set [13], $L = U \cap V$, where U is μ-open and V is μ-closed. A GTS (Z, μ) is called μ-extremally disconnected [7], if the μ-closure of every μ-open set is μ-open. A function $f : (Z, \mu) \to (W, \lambda)$ is said to be (μ, λ)-continuous [6], iff $M \in \lambda$ implies that $f^{-1}(M)$ is μ-open. A nonempty family $\mathcal{H}$ of subsets of Z is called as a *hereditary class* [9], if $L \in \mathcal{H}$ and $B \subset L$, then $B \in \mathcal{H}$. For each $L \subseteq Z$,

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