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ON $(\tau_i, \tau_j) - g^*$- SEMI-CLOSED SETS AND $(\tau_i, \tau_j) - g^*$-SEMI-CONTINUITY IN BITOPOLOGICAL SPACES

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Abstract

Fukutake, T. [1] introduced generalized closed sets in bitopological spaces. Recently El-Tantawy et.al [8] introduced the generalized semi-closed sets and generalized semi-continuity in bitopological spaces. In this paper, we introduce g^*-semi-closed (briefly g*s-closed) sets in bitopological spaces as follows.

Let $i, j \in \{1, 2\}$ be fixed integers. A subset A of a bitopological space (X, τ_1, τ_2) is called $(\tau_i, \tau_j) - g^*$s-closed set if $\tau_j - scl(A) \subseteq U$ whenever $A \subseteq U$ and U is $\tau_i - g$-open in X and we introduce new bitopological spaces $(\tau_i, \tau_j) - Tb^*$, $(\tau_i, \tau_j) - {}_\alpha T_b^*$, $(\tau_i, \tau_j) - T_b^{**}$ and $(\tau_i, \tau_j) - {}^*T_b$- spaces as an application. Further we introduce and study g^*s-continuity in bitopological spaces and study some of their properties.

Key Words and Phrases: $(\tau_i, \tau_j) - g^*s$-*Closed sets,* $(\tau_i, \tau_j) - T_b^*$ *Spaces,* $(\tau_i, \tau_j) - {}_\alpha T_b^*$-*Spaces,* $(\tau_i, \tau_j) - T_b^{**}$-*Spaces,* $(\tau_i, \tau_j) - {}^*T_b$- *Spaces,* $D^*S(\tau_i, \tau_j)$-*Continuity and Bitopological spaces.*

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