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STRONG SPLIT BLOCK CUT VERTEX DOMINATION OF A GRAPH

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ABSTRACT

In this paper we initiate the study of a variation of standard domination, namely strong split block cut vertex domination in G. Let G = (V, E) be a graph and H=BC (G) is the block cut vertex graph of G. A strong split block cut vertex (SSBC) dominating set of G is a set $D \subseteq V[H]$, where $\langle V(H) - D \rangle$ is totally disconnected with at least two vertices. The strong split block cut vertex (SSBC) domination number of a graph G denoted by $\gamma_{ssbc}(G)$ is the minimum cardinality of SSBC-set of G. We determine the best possible upper bounds and lower bounds for $\gamma_{ssbc}(G)$ in terms of the elements of G, characterizing those graphs achieving these bounds. Also we characterize the class of trees for which $\gamma_{ssbc}(G)$ relates to restrained domination number and total restrained domination number of G.

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