Non-split and Inverse Non-split Domination Numbers in the Join and Corona of Graphs

Abstract

A dominating set $D$ of a graph $G = (V;E)$ is non-split dominating set if $V \cap D$ is connected. The non-split domination number of $G$ is the minimum cardinality of a non-split dominating set in $G$. Let $D$ be a minimum dominating set in $G$. If a subset $D' \subseteq V \cap D$ is dominating in $G$, then $D'$ is called an inverse dominating set with respect to $D$. Furthermore, if $V \cap D'$ is connected, then $D'$ is called an inverse non-split dominating set. The inverse non-split domination number of $G$ is the minimum cardinality of an inverse non-split dominating set in $G$.

In this paper, characterization of non-split dominating sets in the join and corona of two graphs are presented. Furthermore, explicit formulas for determining the non-split and inverse non-split domination numbers of these graphs are also determined.

References

- K. Ameenal Bibi, K. Selvakumar. The inverse split and non-split domination in graphs.

Index Terms

Computer Science

Applied Mathematics

Keywords

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