

On perfect Italian domination in the edge-corona of graphs

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For a vertex v in a simple, finite and undirected graph $G = (V(G), E(G))$, the neighborhood $N_G(v)$ of v is the set consisting of all vertices of G which are adjacent to v . A *perfect Italian dominating function* on G is a function $f : V(G) \rightarrow \{0, 1, 2\}$ such that for each $u \in V(G)$ with $f(u) = 0$, $\sum_{x \in N_G(u)} f(x) = 2$. The *weight* of a perfect Italian dominating function f is the value $\omega_G(f) = \sum_{v \in V(G)} f(v)$. The *perfect Italian domination number* of G is the minimum weight of a perfect Italian dominating function on G . In this paper, we study the perfect Italian domination in graphs under edge-corona.