Hop and Perfect Domination Numbers of Bloom Graph

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ABSTRACT

Bloom graph is a potential interconnection network with salient features. Cylindrical nature and its competent with usual grid cylinder play crucial role in interconnection network properties like packing density. We produce techniques and construction to explore perfect k-domination number and various type of hop domination numbers. In finding hop domination number, we identify the covering of edges with certain subgraphs, especially a type of tree giving the maximum upper bound for hop domination number. We generate algorithm to find perfect k-domination number of Bloom graph.

Keywords: Bloom Graph, k-perfect domination, hop domination