ON THE LICT GEODETIC NUMBER OF A GRAPH

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ABSTRACT

For any graph G=(V,E) , the lict graph of G denoted by $\eta(G)$. The Lict graph $\eta(G)$ of a graph G as the graph whose vertex set is the union of the set of edges and the set of cut vertices of G in which two vertices are adjacent if and only if the corresponding edges of G are adjacent or the corresponding members are incident. For two vertices u and v of G, the set I(u,v) consists of all vertices lying on a u-v geodesic in G. If S is a set of vertices of G, then I(S) is the union of all sets I(u,v) for vertices u and v in S. The geodetic number g(G) is the minimum cardinality among the subsets S of V(G) with I(S)=V(G). In this paper we obtain the geodetic number of lict graph of any graph. Also, obtain many bounds on geodetic number in terms of elements of G.

KEYWORDS : Cross product, Distance, Edge covering number, Edge independent number, Geodetic number, Lict graph.