Abstract

In this paper the concept of connected edge monophonic domination number of a graph is introduced. A set of vertices M of a graph G is a connected edge monophonic domination set (CEMD set) if it is edge monophonic set, a domination set of G and the induced sub graph is connected. The connected edge monophonic domination number (CEMD number) of G, \( \gamma_{\text{CE}}(G) \) is the cardinality of a minimum CEMD set. CEMD number of some connected graphs are realized. Connected graphs of order \( n \) with CEMD number \( n \) are characterised. It is shown that for every pair of integers \( m \) and \( n \) such that \( 3 \leq m \leq n \), there exist a connected graph \( G \) of order \( n \) with \( \gamma_{\text{CE}}(G) = m \). Also, for any positive integers \( p, q \) and \( r \) there is a connected graph \( G \) such that \( m(G) = p, m_{\text{CE}}(G) = q \) and \( \gamma(G) = r \).
connected edge monophonic domination number of a graph

\( m \) = 3

(3) \( \gamma_m^c \) again, for any connected graph \( G \).

\( \gamma_m^c \) lies between \( n/(1+\Delta(G)) \) and \( n \).

References

4. F.Buckley, and F.Harary. Distance in Graphs, Addison Wesley, Redwood City, CA (1990):

Index Terms

Computer Science

Against Mathematics

Edge monophonic number, monophonic domination number, edge monophonic domination number, connected edge monophonic domination number.