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 $G$, $\gamma_{m_{ce}}(G)$ 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 $\gamma$ $m$

$\infty$

$(G) = m$. Also, for any positive integers $p, q$ and $r$ there is a connected graph $G$ such that $m(G) = p, m$

$\infty$

$(G) = q$ and $\gamma$

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m

or

(G) \Rightarrow y.

Again, for any connected graph G, y

\[ mce(G) \leq n/(1+\Delta(G)) \]

and n.

References

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

Index Terms

- Computer Science
- Applied Mathematics

Keywords

- Edge monophonic number
- Monophonic domination number
- Edge monophonic domination number
- Connected edge monophonic domination number