Let $G$ be a simple, finite and connected graph. A dominating set $D$ of a graph $G$ is a global dominating set if $D$ is also a dominating set of $G$. The global domination number $\gamma(G)$ is the minimum cardinality of a minimal global dominating set of $G$. A graph is global domination edge critical if addition of any arbitrary edge changes the global domination number. On the other hand, a graph is global domination edge stable if addition of any arbitrary edge has no effect on the global domination number. In this paper, we study the concepts of global domination and connected global domination upon edge addition stable property for cycle and path graphs. We determine sharp bounds on the global domination and connected global domination number of global domination, total global domination and connected global domination edge addition stable graphs.

References


**Index Terms**

Computer Science  
Applied Mathematics

**Keywords**

Domination  
Global Domination  
Connected Global Domination  
Edge Addition Stable