Abstract

Let $G(V,E)$ be a graph with $p$ vertices and $q$ edges. A graph $G(p,q)$ is said to be a Beta combination graph if there exist a bijection $f: V(G) \rightarrow \{1,2,\ldots,p\}$ such that the induced function $B_f: E(G) \rightarrow \mathbb{N}$, $\mathbb{N}$ is a natural number, given by $B_f(\{uv\})$, every edges $uv \in G$ and are all distinct and the function $f$ is called the Beta combination labeling. In this paper, we proved the Petersen graph, Complete graph $K_n (n \geq 8)$, Ladder $L_n (n \geq 2)$, fan $f_n (n \geq 2)$, wheel $W_n(n \geq 3)$, path $P_n$, cycle $C_n(n \geq 3)$, friendship graph $F_n (n \geq 1)$, complete bipartite graph $K_n,n (n \geq 2)$, Tree $T_n$, triangle snake, $n$-bistar graph $B_n,n$ and Star graph $K_{1,n} (n>1)$ are the Beta combination graphs. Also we proved Complete graph $K_n (n>8)$ is not a Beta combination graph.

References

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**Index Terms**

Computer Science \hspace{1cm} Applied Sciences

**Keywords**

Beta combination graph and Beta combination labeling