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 $f: V(G) \to \{1,2,\ldots,p\}$ such that the induced function $B_f: E(G) \to \mathbb{N}$, $\mathbb{N}$ 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 $L_n$ ($n$ even), 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.

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Beta Combination Graphs

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Index Terms

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