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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Beta Combination Graphs

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Index Terms

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