Abstract

Let \( G \) be a \((p, q)\) graph. A one-one map \( f : V(G) \rightarrow \{?1, ?2, \ldots, ?p\} \) is said to be a pair sum labeling if the induced edge function, \( f_E : E(G) \rightarrow \mathbb{Z} - \{0\} \) defined by \( f_E(uv) = f(u) + f(v) \) is one-one and \( f_E(E(G)) \) is either of the form \( \{?k_1, ?k_2, \ldots, ?k_{q/2}\} \) or \( \{?k_1, ?k_2, \ldots, ?k_{(q+1)/2}\} \) \( \{?k_{(q+1)/2}\} \) according as \( q \) is even or odd. Recently, the pair sum labeling was introduced by R. Ponraj, J. V. X. Parthipan [3]. In this paper we study about the pair sum labeling of the coconut tree \( CT(m, n) \), the Y-tree \( Y_{n+1} \), the Jelly fish graph \( J(m, n) \), the \((m, 2)\)-kite, \((m, 1)\)-kite, the theta graph \(?I[m]\) , for \( m \) even and complete binary tree.


**Index Terms**

Computer Science

Applied Mathematics

**Keywords**

pair sum labeling

pair sum graph