Abstract

Let G be a graph with vertex set V(G) and edge set E(G), and consider the set A = {0, 1}. A labeling \( f : V(G) \to A \) induces a partial edge labeling \( f : E(G) \to A \) defined by \( f(xy) = f(x) \) if and only if \( f(x) = f(y) \), for each edge \( xy \in E(G) \). For \( i \in A \), let \( v_f(i) = |\{v \in V(G) : f(v) = i\}| \) and \( e_f(i) = |\{e \in E(G) : f(e) = i\}| \). A labeling \( f \) of a graph \( G \) is said to be friendly if \( |v_f(0)| \neq |v_f(1)| \leq 1 \). A friendly labeling is called balanced if \( |e_f(0)| \neq |e_f(1)| \leq 1 \). The balance index set of the graph \( G \), \( Bl(G) \), is defined as \( \{e_f(0), \ldots, e_f(1)\} \): the vertex labeling \( f \) is friendly. We provide balanced labeling and balance index set of one point union of two complete graphs.

References

Balanced Labeling and Balance Index Set of One Point Union of Two Complete Graphs


Index Terms

Computer Science  Applied Mathematics

Keywords

Vertex labeling  Friendly labeling  Cordial labeling  Balanced labeling  and Balance index set.