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EDGE-ODD GRACEFUL LABELING OF UNIFORM n-WHEEL SPLIT GRAPH

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Abstract: In 2009, Solairaju and Chithra introduced edge - odd graceful labeling. A simple graph G with q edges is called an edge odd graceful graph, EOGG, if there is a bijection f from the edge set of the graph to the set $\{1, 3, 5, ...(2q-1)\}$ such that when each vertex is assigned the sum of all values of the edges incident to it modulo $2q$, the resulting vertex labels are distinct. The graphs related to Paths and cycles, the wheel and complete graphs, the tree and related graphs are edge-odd graceful. The prism of cycle c_n for $(n \geq 3)$,the prism of star graph and prism of wheel graph are edge - odd graceful. In this paper, we define an uniform n - wheel split graph and prove that uniform 3- wheel split graph admit edge - odd graceful labeling.

Keywords and Phrases: Edge-odd graceful graph, uniform n-wheel split graph.

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1. Introduction

A graph labeling is an assignment of integers to the vertices or edges or both subject to certain conditions. Let G be a simple graph with q edges. Let $V(G)$ and $E(G)$ denote the vertex set and the edge set of G respectively. In 1967, Rosa defined graceful labeling as a function f of a graph G with q edges if f is an injection from the vertices of G to the set {0,1,....q} such that when each edge xy is assigned the label $|f(x) - f(y)|$,the resulting edge labels are distinct. In 1991, Gnanojothi introduced odd graceful labeling such as if there is an injection f from