

MULTIPLICATIVE ZAGREB INDICES OF FOUR NEW \mathcal{F} -SUMS OF GRAPHS

B. Basavanagoud and Mahammadsadiq Sayyed

Department of Mathematics,
Karnatak University,
Dharwad - 580003, Karnataka, INDIA

E-mail : b.basavanagoud@gmail.com, sadiqs26@gmail.com

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Abstract: For molecular graph G , the first multiplicative Zagreb index is defined as the product of squares of degree of all vertices of graph and the second multiplicative Zagreb index is defined as $\prod_2(G) = \prod_{u \in V(G)} d_G(u)^{d_G(u)}$. In this paper, we obtain first and second multiplicative Zagreb indices of four new \mathcal{F} -Sums of graphs.

Keywords and Phrases: F-sums of graphs, multiplicative Zagreb indices, graph indices.

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1. Introduction

The topological indices are graph invariants which are numerical values associated with molecular graphs. In mathematical chemistry, molecular descriptors play a leading role specifically in the field of QSPR/QSAR modelling. The topological indices were initiated when the eminent chemist H. Wiener found the first topological index, known as Wiener index, the Zagreb indices belong to the well known and well researched molecular descriptors. It was firstly presented by Gutman and Trinajestič in [14, 15, 26], where they investigated how the total energy of π -electron depends on the structure of molecules. For more on topological indices, one can refer [3, 7, 10, 20, 18].