

DERIVED STRUCTURES AND THEIR GRAPH INVARIANT

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Abstract: The symmetric division deg invariant is one of the 148 discrete Adriatic invariants introduced several years ago. In this paper, we obtained the expressions for symmetric division deg invariant of some derived graph and its complements.

Keywords and Phrases: Degree, Zagreb invariant, symmetric division deg invariant.

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1. Introduction and Preliminaries

Molecular descriptors, results of functions mapping molecule's chemical information [8] into a number have found applications in modeling many physicochemical properties in QSAR and QSPR studies [1]. Damir Vukicević et al. [10] observed that many of these descriptors are defined simply as the sum of individual bond contributions. Among the 148 discrete Adriatic invariants studied in [10], whose predictive properties were evaluated against the benchmark datasets of the International Academy of Mathematical Chemistry, 20 invariants were selected as significant predictors of physicochemical properties. One of these useful discrete Adriatic invariants is the symmetric division deg invariant which is defined