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THE EDGE C4 n-SIGRAPH OF A SYMMETRIC n-SIGRAPH

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Abstract

An n − tuple (a1, a2, · · · , an) is symmetric, if ak = an−k+1, 1 ≤ k ≤ n. Let Hn = {(a1, a2, · · · , an) : ak {+, −}, ak = an−k+1, 1 ≤ k ≤ n} be the set of all symmetric n-tuples. A symmetric n-sigraph (symmetric n-marked graph) is an ordered pair Sn = (G, _)(Sn = (G, μ)), where G = (V,E) is a graph called the underlying graph of Sn and _ : E → Hn (μ : V → Hn) is a function. Analogous to the concept of the edge C4 graph of a graph, the edge C4 symmetric n-sigraph of a symmetric n-sigraph is defined. It is shown that for any symmetric n-sigraph Sn, its edge C4 symmetric n-sigraph is i-balanced. We then give structural characterization of edge C4 symmetric n-sigraphs. Further, we obtain some switching equivalence relationship between symmetric n-sigraph and edge C4 symmetric n-sigraph.

Key Words and Phrases: Symmetric n-sigraphs, Symmetric n-marked graphs, Balance, Switching, Edge C4 symmetric n-sigraphs, Complementation.

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