SPECTRAL CHARACTERIZATION OF †-SHAPE TREES

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Abstract. The †-shape tree is the coalescence of the star $K_{1,4}$ and the path $P_{n-4}$ with respect to two pendent vertices. In this paper, it is showed that the †-shape tree is determined by its adjacency spectrum if and only if $n \neq 2k + 9$ ($k \in \{0, 1, \ldots\}$). Furthermore, all the cospectral mates of the †-shape tree are found when $n = 2k + 9$.

Key words. †-shape tree, Adjacency spectrum, Spectral characterization, Cospectral graphs.

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