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Shaohui Wang* (swang4@go.olemiss.edu), The University of Mississippi, University, MS 38677, and **Bing Wei** (bwei@olemiss.edu), The University of Mississippi, Oxford, MS 38655. *Padmakar - Ivan index of k -trees.*

The Padmakar - Ivan (PI) index is a distance-based topological index and a molecular structure descriptor, which recently has found numerous chemical applications. In this paper, we obtain the upper bounds about PI -indices of the generalized trees, the k -trees, and characterize the extremal graphs. Also, we give the exact values of PI -indices for some classes of k -trees. (Received January 26, 2015)