

DEGREE DISTANCE AND GUTMAN INDEX OF INCREASING TREES

Journal: *Transactions on Combinatorics (Trans. Comb. or TOC)*

Author(s): Ramin Kazemi and Leila Khaleghi Meimondari

Abstract: The Gutman index and degree distance of a connected graph G are defined as

$$\text{Gut}(G) = \sum_{\{u,v\} \subseteq V(G)} d(u)d(v)d_G(u,v),$$

and

$$DD(G) = \sum_{\{u,v\} \subseteq V(G)} (d(u) + d(v))d_G(u,v),$$

respectively, where $d(u)$ is the degree of vertex u and $d_G(u,v)$ is the distance between vertices u and v . In this paper, through a recurrence equation for the Wiener index, we study the first two moments of the Gutman index and degree distance of increasing trees.

Key words: Increasing trees, the Wiener index, the Gutman index, degree distance.

Vol: 5(2)

Pages: 23-31

Year: 2016

Publisher: University of Isfahan

ISSN: 2251-8657

Indexing and Abstracting: ISI, ISC (TOC has the credit of ELMI-PAJOHESHI), Scientific Information Database (SID), Zentralblatt MATH, magiran, Google Scholar

Link: <http://combinatorics.ir/>