South East Asian J. of Math. & Math. Sci. **ISSN : 0972-7752**
Vol.13, No.1 2017, pp. 11-18

K BANHATTI AND K HYPER-BANHATTI INDICES OF WINDMILL GRAPHS

V. R. Kulli[1], B. Chaluvaraju[2] and H. S. Boregowda[3]

[1] Department of Mathematics,
Gulbarga University, Gulbarga - 585 106, INDIA.
E-mail: vrkulli@gmail.com

[2] Department of Mathematics, Bangalore University,
Jnana Bharathi Campus, Bangalore -560 056, INDIA
E-mail: bchaluvaraju@gmail.com

[3] Department of Studies and Research in Mathematics,
University Constituent College Campus,
Tumkur University, Tumkur - 571 103, INDIA.
E-mail: bgsamarasa@gmail.com

Abstract: Let G be a connected graph with vertex set $V(G)$ and edge set $E(G)$. The first and second K Banhatti indices of G are defined as $B_1(G) = \sum_{ue}[d_G(u) + d_G(e)]$ and $B_2(G) = \sum_{ue}[d_G(u)d_G(e)]$, where ue means that the vertex u and edge e are incident in G. The first and second K hyper-Banhatti indices of G are defined as $HB_1(G) = \sum_{ue}[d_G(u) + d_G(e)]^2$ and $HB_2(G) = \sum_{ue}[d_G(u)d_G(e)]^2$, respectively. In this paper, we compute the first and second K Banhatti indices of windmill graphs. In addition, the first and second K hyper-Banhatti indices of dutch and french windmill graphs are determined.

Keywords: K Banhatti indices, K hyper-Banhatti indices, dutch windmill graph and french windmill graph.

2010 Mathematics Subject Classification: 05C05, 05C07, 05C35.

1. Introduction

All graphs considered in this paper are finite, connected, undirected without loops and multiple edges. Any undefined term in this paper may be found in Kulli [5].

Let G be a connected graph with vertex set $V(G)$ and edge set $E(G)$. The degree $d_G(v)$ of a vertex v is the number of vertices adjacent to v. The edge