THE PRODUCT CONNECTIVITY BANHATTI INDEX OF A GRAPH

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Abstract

Let $G = (V, E)$ be a connected graph with vertex set $V(G)$ and edge set $E(G)$. The product connectivity Banhatti index of a graph G is defined as $PB(G) = \sum_{ue} \frac{1}{\sqrt{d_G(u)d_G(e)}}$, where ue means that the vertex u and edge e are incident in G . In this paper, we determine $PB(G)$ of some standard classes of graphs. We also provide some relationship between $PB(G)$ in terms of order, size, minimum / maximum degrees and minimal non-pendant vertex degree. In addition, we obtain some bounds on $PB(G)$ in terms of Randić, Zagreb and other degree based topological indices of G .

Keywords: Randić index, Zagreb indices, Banhatti indices, product connectivity Banhatti index.

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