

Schultz Index and Modified Schultz Index of Non-Commuting Graph Associated to Some Finite Groups

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Abstract

Let Γ be a molecular graph. The Schultz index of a graph and modified Schultz index of a graph involved both degree of a vertex in a graph and distances between two vertices in a graph. In this paper, the Schultz index and modified Schultz index of the non-commuting graph associated to some finite groups, which are the dihedral groups, generalized quaternion groups, and quasi-dihedral groups, are computed. The general formula of such indices of the non-commuting graph associated to these three types of groups are also found.

Keywords – Schultz index, modified Schultz index, non-commuting graph, conjugacy class graph, finite groups.