On Automorphism Group Action and topological indices for Certain Families of Dendrimers

Uzma Ahmad* and Rabia Yousaf, Department of Mathematics, University of the Punjab, New Campus, Lahore, Pakistan.

The molecular graph theory is an important branch of the Mathematical Chemistry which is used for the development of the mathematical modeling of the molecular structures. The graph theory envisions chemical structures as mathematical object sets consisting of vertices or points, which represent atoms, and lines or edges, representing covalent bonds or shared electron pairs of covalently linked atoms. The topological index (or the molecular descriptor) of a molecular graph G is a number $Top(G) \in R$ that depicts or characterize the properties and the topology of a chemical compound. In this talk, computation of certain toplogical indices of some infinite classes of regular dendrimers by using automorphism group action on the vertices and edges in terms of given parameter n are discussed.

Keywords: Graph automorphism, molecular graph topological indices , dendrimer graphs