

On the atom bond connectivity index of certain trees and unicyclic graphs

ABSTRACT

The atom-bond connectivity (ABC) index is one of the recently most investigated degree based molecular structure descriptors that have applications in chemistry. For a graph G , the ABC index is defined as $ABC(G) = \sum_{uv \in E(G)} (\deg(u) + \deg(v) - 2)$, where $\deg(u)$ denotes the degree of a vertex u in G . In this paper, we obtain the general formula of the ABC index for certain trees and unicyclic graphs with their representing by Alkanes and Cycloalkanes.

Keyword: ABC index; Alkanes; Cycloalkanes; Trees; Unicyclic graph