Distance Equienergetic graphs

G. Indulal *

Department of Mathematics,

St.Aloysius College, Edathua, Alappuzha - 689573

Abstract

Let G be a connected graph with vertex set $V(G) = \{v_1, v_2, \ldots, v_p\}$. The distance matrix $D = D(G)$ of G is defined so that its (i, j)-entry is equal to $d_G(v_i, v_j)$, the distance between the vertices v_i and v_j of G.The eigenvalues of $D(G)$ are said to be the D-eigenvalues of G and form the D-spectrum of G, denoted by $spec_D(G)$. The D-energy $E_D(G)$ of the graph G is the sum of the absolute values of its D-eigenvalues. Two (connected) graphs are said to be D-equienergetic if they have equal D-energies. In this talk some classes of equienergetic graphs are presented.

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*E-mail:indulalgopal@gmail.com

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