International J. of Math. Sci. & Engg. Appls. (IJMSEA)
ISSN 0973-9424, Vol. 7 No. II (March, 2013), pp. 139-148

ON THE ENERGY OF COMPLEMENT OF STARS

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Abstract

The concept of energy of a graph was put forward by I. Gutman in 1978 [1]. The characteristic polynomial of a graph G with p vertices is defined as $\phi(G : \lambda) = det(\lambda I - A(G))$, where A is the adjacency matrix of G and I is the unit matrix. The root of the characteristic equation $\phi(G : \lambda) = 0$, denoted by $\lambda_1, \lambda_2, \cdots, \lambda_p$ are the eigenvalues of G. The energy $E = E(G)$ of a graph G is defined as $E(G) = \sum_{i=1}^{p} |\lambda_i|$.
The graphs with large number of edges are referred as graph representations of inorganic clusters, called as Cluster graphs.
In this paper we obtain the characteristic polynomial and energy of class of cluster graphs which are termed as complement of stars.

Key Words : *Spectra of graphs, Energy of graphs, Stars, Cluster graphs.*

AMS Subject Classification : 05C50.