Minimum Majority Dominating Energy Value For Zodiac Sign

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Abstract

The concept of a graph's energy, which is taken from the concept of a molecule's total electron energy, was initially introduced by Ivan Gutman. Complementary and alternative medicine has recently been affected by research into human energy. Research has centred on the chakras, which are sub-atomically linked to the endocrine glands. According to the Vedas, these energy centres are symbolised by wheels with different numbers of petals.In this article, Minimum Majority Domination energy value of five zodiac sign has studied.
Keywords: Minimum Majority Dominating energy value.

1. Introduction

The term "Energy of a Graph" was first used in 1978 by Ivan Gutman. Erich Huckel, however, provided the inspiration for this idea in the 1930s. We can approximatively calculate -electronic energies using the Huckel Molecular Orbital theory. A graph that displays the carbon skeleton of a molecule has been used to model this chemical notion. This idea and the solution to the eigen value problem go hand in hand. Because of this, resolving the eigenvalue issue for H is the same as resolving the eigenvalue issue for A. When the appropriate E value is positive, an orbital typically includes two -electrons exactly, and when E is negative, it does not.

Let G be a graph with n vertices and m edges and let $A = (a_{ij})$ be the adjacency matrix of the graph. The eigen values $\alpha_1, \alpha_2, \ldots \alpha_n$ of A, assumed in non increasing order, are the eigen values of the graph G. As A is real symmetric, the eigen values of G are real with sum equal to zero. The energy $E(G)$ of G is defined to be the sum of the absolute values of the eigen values of G.

$$\text{i.e, } \varepsilon(G) = \sum_{i=1}^{n} |\alpha_i|$$

2.Energy value for zodiac sign Minimum Majority Domination parameter:

Aries:
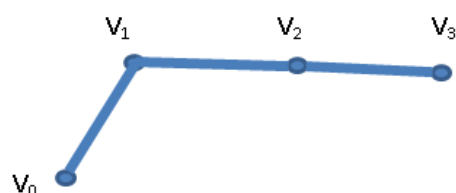
The Minimum Majority dominating set is

$$D = \{V_0\}$$

Characteristic equation

$$f_n(G,\alpha) = \det\ \left[\alpha I - A_D(G)\right]$$

The characteristics equation of MM

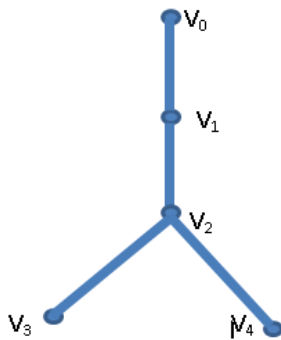$$D(G,\alpha) = \alpha^4 - \alpha^3 - 3\alpha^2 + 2\alpha + 1 = 0$$

The Eigen value of the Minimum Majority Dominating Matrix

$$\alpha_1 = 1, \alpha_2 = -1.5321, \alpha_3 = -0.34730, \alpha_4 = 1.8794$$

Energy value of Minimum Majority dominating Matrix is

$$\varepsilon_{MMD}(G) = \sum_{i=1}^{4} |\alpha_i| \approx 1.0000$$

3.**Cancer:**

The Minimum Majority dominating set is

$$D = \{V_2\}$$

Characteristic equation

$$f_n(G,\alpha) = \det\ \left[\alpha I - A_D(G)\right]$$

The characteristics equation of MM

$$D(G,\alpha) = \alpha^5 - \alpha^4 - 4\alpha^3 + \alpha^2 + 2\alpha = 0$$
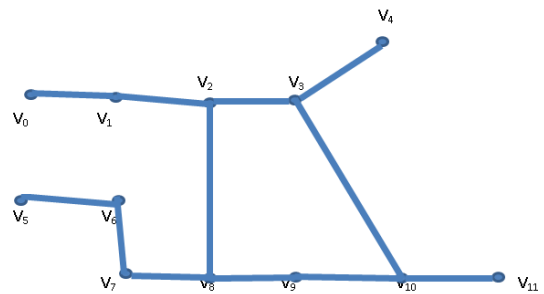
The Eigen value of the Minimum Majority Dominating Matrix are

$$\alpha_1 = 0, \alpha_2 = -1.5085, \alpha_3 = -0.67964, \alpha_4 = 0.82578, \alpha_5 = 2.3623$$

Energy value of Minimum Majority dominating Matrix is

$$\varepsilon_{MMD}(G) = \sum_{i=1}^{5} |\alpha_i| \approx 0.9999$$

4.**Virgo:**

The Minimum Majority dominating set is

$$D = \{V_2, V_{10}\}$$

Characteristic equation

$$f_n(G,\alpha) = \det\ \left[\alpha I - A_D(G)\right]$$

The characteristics equation of

$$\begin{aligned}
MMD(G,\alpha) = \ & \alpha^{12} - 2\alpha^{11} \\
& - 11\alpha^{10} \\
& + 18\alpha^9 \\
& + 44\alpha^8 \\
& - 56\alpha^7 \\
-77\alpha^6 + 72\alpha^5 + {} & 56\alpha^4 \\
& - 36\alpha^3 \\
& - 13\alpha^2 + 4\alpha \\
& = 0
\end{aligned}$$

The Eigen value of the Minimum Majority Dominating Matrix are

$$\alpha_1 = -1, \alpha_2 = 0, \alpha_3 = 1, \alpha_4 = -1.95214, \alpha_5 = -1.72384$$
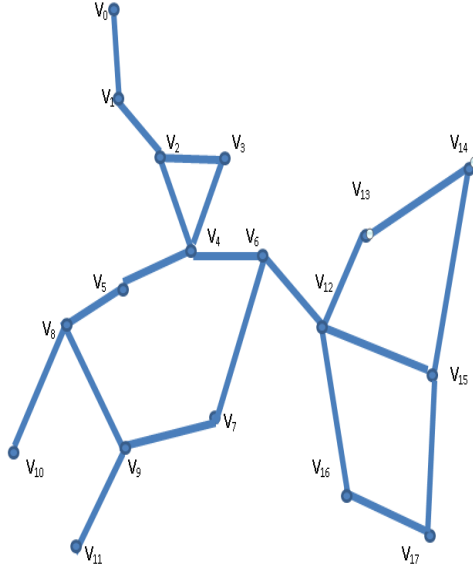
$$\alpha_6 = -1.308, \alpha_7 = -0.514909, \alpha_8 = 0.226328, \alpha_9 = 0.871782, \alpha_{10} = 1.60651$$

$$\alpha_{11} = 1.97469, \alpha_{12} = 2.81958$$

Energy value of Minimum Majority dominating Matrix is

$$\varepsilon_{MMD}(G) = \sum_{i=1}^{12} |\alpha_i| \approx 2.0000$$

5.Sagittarius:

The Minimum Majority dominating set is
$$D = \{V_4, V_{12}\}$$

$\alpha_1 = -1, \alpha_2 = 1, \alpha_3 = -2.38094, \alpha_4 = -2.11688, \alpha_5 = -1.65967$

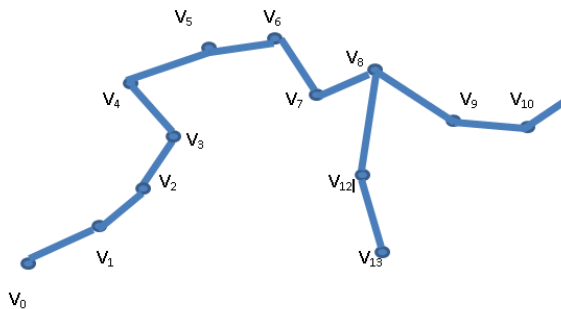$\alpha_6 = -1.3139, \alpha_7 = -1.18102, \alpha_8 = -0.627167, \alpha_9 = -0.384248, \alpha_{10} = -0.18078$

$\alpha_{11} = 0.181954, \alpha_{12} = 0.420177, \alpha_{13} = 0.834175, \alpha_{14} = 1.22557, \alpha_{15} = 1.32713$

$\alpha_{16} = 1.98997, \alpha_{17} = 2.74693, \alpha_{18} = 3.11869$

Energy value of Minimum Majority dominating Matrix is

$$\varepsilon_{MMD}(G) = \sum_{i=1}^{18} |\alpha_i| \approx 2.0000$$

6.Aqurius:

Characteristic equation
$$f_n(G, \alpha) = \det\left[\alpha I - A_D(G)\right]$$

The characteristics equation of

$$MMD(G, \alpha) = \alpha^{18} - 2\alpha^{17}$$
$$- 20\alpha^{16}$$
$$+ 32\alpha^{15}$$
$$+ 160\alpha^{14}$$
$$- 192\alpha^{13}$$
$$-650\alpha^{12} + 560\alpha^{11}$$
$$+ 1439\alpha^{10}$$
$$- 865\alpha^9$$
$$- 1762\alpha^8$$
$$+ 706\alpha^7$$
$$+ 1151\alpha^6$$
$$- 276\alpha^5$$
$$- 359\alpha^4$$
$$+ 38\alpha^3$$
$$+ 41\alpha^2 - \alpha$$
$$- 1 = 0.$$

The Eigen value of the Minimum Majority Dominating Matrix are

The Minimum Majority dominating set is
$$D = \{V_4, V_8\}$$

Characteristic equation
$$f_n(G, \alpha) = \det\left[\alpha I - A_D(G)\right]$$

The characteristics equation of

$$MMD(G,\alpha) = \alpha^{14} - 2\alpha^{13} - 12\alpha^{12} + 21\alpha^{11} + 57\alpha^{10} - 83\alpha^9 - 134\alpha^8$$
$$+ 155\alpha^7 + 161\alpha^6 - 139\alpha^5 - 92\alpha^4 + 53\alpha^3 + 20\alpha^2 - 6\alpha - 1 = 0$$

The Eigen value of the Minimum Majority Dominating Matrix are

$$\alpha_1 = -1.83939, \alpha_2 = -1.70537, \alpha_3 = -1.47148, \alpha_4 = -1.20789, \alpha_5 = -0.87789$$
$$\alpha_6 = -0.494135, \alpha_7 = -0.132385, \alpha_8 = 0.367241, \alpha_9 = 0.675455, \alpha_{10} = 1.11066$$
$$\alpha_{11} = 1.3394, \alpha_{12} = 1.54352, \alpha_{13} = 2.20131, \alpha_{14} = 2.49095$$

Energy value of Minimum Majority dominating Matrix is

$$\varepsilon_{MMD}(G) = \sum_{i=1}^{14} |\alpha_i| \approx 2.0000$$

7.Conclusions

The author Investigate the Minimum Majority dominating energy value for five zodiac sign. Further the author will Investigate the energy value through the other parameter in domination for this zodiac sign.

Acknowledgements

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