On the Zeros of the Degree Polynomial of a Graph

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Abstract : Graph polynomial is one of the algebraic representations of the Graph. The degree polynomial is one of the simple algebraic representations of graphs. The degree polynomial of a graph G of order n is the polynomial Deg(G, x) with the coefficients deg(G,i) where deg(G,i) denotes the number of vertices of degree i in G. In this article, we investigate the behavior of the roots of some families of Graphs in the complex field. We investigate for the graphs having only integral roots. Further, we characterize the graphs having single roots or having real roots and behavior of the polynomial at the particular value is also obtained.