

MAXIMAL POLYNOMIAL MODULUS LIMITS AND ZERO-FREE AREAS

SYED MUZAFFAR HUSSAIN DEHBEDI¹ & DR. ASHWINI KUMAR²

¹PHD Scholar in Sunrise University-Alwar (Bagad) Rajasthan, India

²Professor Sunrise, University-Alwar (Bagad) Rajasthan, India

ABSTRACT

This work explores the space of all possible modulus sets for a given polynomial p , denoted by the notation $M(p)$. In this study, we attempt a formulation of p that preserves certain features of $M(p)$. Simultaneously with the publication of the cubic polynomials p that by Jassim and London, Tyler discovered a quantic polynomial p . Our results were far more effective than any previous ones of their kinds. With careful planning, we crafted polynomials p and p such that their modulus M has both singleton components at a_1, a_2, \dots , and a and a discontinuity (p) . Considering that there can be no more than a finite number of discontinuities in we conclude that the results are accurate. Let $p(z)$ be a polynomial in n dimensions, with some zeroes at the point $z_0 \in C$ where $|z_0| = 1$, and the remaining zeroes on or outside the perimeter of a given disc. For the location $z=0 \in C$, the symbol C is used. Here, we'll take a quick look at these polynomials and calculate their bounds.

KEYWORDS: Polynomials, Maximum Modulus, Zeros & Prescribed Disk

Received: Feb 14, 2022; **Accepted:** Mar 04, 2022; **Published:** Mar 10, 2022; **Paper Id.:** IJMCAARJUN20232