



UNIQUENESS ON DIFFERENTIAL DIFFERENCE POLYNOMIALS OF MEROMORPHIC FUNCTION SHARING A SMALL FUNCTION

SOMALATHA M.T.

Department of Mathematics, Government Science College,
Bangalore - 560 001, Karnataka, India.
(E-mail: somalatha71@gmail.com)

SHILPA N.

Department of Mathematics, Presidency University,
Itgalpura, Bangalore - 560 064, Karnataka, India.
(E-mail: shilpa.n@presidencyuniversity.in)

TOUQEER AHMED

Department of Mathematics, Dayanandasagar University, Devarakaggalahalli, Harohalli,
Kanakapura Road, Bengaluru - 562 112, Karnataka, India.
(E-mail: touqeer.ahmed33@gmail.com)

and

MANJUNATH B.E.*

Department of Mathematics, Dayanandasagar college of Engineering, Kumaraswamy Layout,
Bengaluru - 560111, Karnataka, India.
(E-mail: manjunath.bebub@gmail.com)

Abstract. A combination of complex differentials and differences gives complex differential-difference polynomials. Nevanlinna developed the classical results of the distribution of a -points of entire functions to meromorphic functions. A differential-difference polynomial is a polynomial in $f(z)$, shifts, and its derivatives of shifts. In this article, we prove the uniqueness results of a meromorphic function whose differential difference polynomial shares a function that is small. These results extend the results of Thin [21] and Dyavanal [11].

*corresponding author

Communicated by Editors; Received January 31, 2026

AMS Subject Classification: 30D35.

Keywords: Entire function, Meromorphic function, Uniqueness, Shift operator, Difference polynomial, Differential polynomial.