UNICITY OF MEROMORPHIC FUNCTION WITH THEIR SHIFT OPERATOR SHARING SMALL FUNCTION

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Abstract: In this paper, we introduce a new notation of reduced linear shift operator $L_c^r(\phi)$, and with the aid of this new operator, we study the uniqueness of meromorphic functions $\phi(z)$ and $L_c^r(\phi)$ share ∞ CM in the extended complex plane. The results obtained in the paper significantly improve a existing result. Further, using the notion of sets, we deal the same problem. We exhibit a handful result to justify certain statements relevant to the content of the paper.

Keywords and Phrases: Uniqueness, Sharing value, Meromorphic Functions, Small Function and shift operator.

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1. Introduction and Preliminaries

We assume in this paper that the readers are familiar with the fundamental concepts of Nevanlinna value distribution theory, see ([15, 25]). A meromorphic function is one that is meromorphic across the entire complex plane. By $S^*(\sigma, \phi)$,