## J. Adv. Math. Stud.

Vol. 16(2023), No. 3, 265-274

http://journal.fairpartners.ro

## SHIFT OF DIFFERENTIAL POLYNOMIAL OF ENTIRE FUNCTIONS

## TAPAS LOWHA

ABSTRACT. In this paper, we deal with the uniqueness results of difference-differential polynomials of entire functions sharing a value with ignoring multiplicities. The results of this paper improve and generalize the results of X. Qian and Y.S. Ye [3] and K. Zhang, H.X. Yi [10] and many others.

## REFERENCES

- [1] W.K. Hayman: Meromorphic Functions, Clarendon Press, Oxford, 1964 (OMM).
- Y. Liu, Y. Cao, X. Qi and H. Yi: Value sharing results for q-shifts difference polynomials, Discrete Dyn. Nat. Soc, 2013(2013), Article ID 152069, 6 pages.
- [3] X. Qian and Y.S. Ye: Some uniqueness results of q-shift difference polynomials involving sharing functions, Appl. Math., 8(2017), 1117-1127.
- [4] X.L. Wang, H.Y. Xu and T.S. Zhan: Properties of q-shift difference-differential polynomial of meromorphic functions, Adv. Difference Equ., Art. No. 249 (2014), 16 pages.
- [5] C.C. Yang: On deficiencies of differential polynomials II, Math. Z., 149(1972), 107-112.
- [6] H.X. Yi: Uniqueness of meromorphic functions and a question of C.C. Yang, Complex Var. Elliptic Equ., 14(1990), No. 1, 169-176.
- [7] H.X. Yi: Meromorphic functions that share one or two values II, Kodai Math. J., 22(1999), 264-272.
- [8] X.Y. Zhang, J.F. Chen and W.C. Lin: Entire or meromorphic functions sharing one value, Comput. Math. Appl., 56(2008), 1876-1883.
- [9] F.G. Zhang and L.L. Wu: Notes on the uniqueness of meromorphic functions concerning differential polynomials, J. Inequal. Appl., 2019, Art. No. 66 (2019), 14 pages.
- [10] K. Zhang and H.X. Yi: The value distribution and uniqueness of one certain type of differentialdifference polynomials, Acta Math. Sci. Ser. B Engl. Ed., 34B(2014), No. 2, 719-728.
- [11] X.B. Zhang and H.X. Yi: On some problems of difference functions and difference equations, Bull. Malays. Math. Sci. Soc., 36(2013), No. 4, 1127-1137.

Sarsuna College Department of Mathematics Kolkata-700061, West Bengal, India E-mail address: t.lowha@gmail.com

Received: February 08, 2023. Revised: May 25, 2023.

 $<sup>2010\</sup> Mathematics\ Subject\ Classification:\ 30 D35.$ 

 $Key\ words\ and\ phrases$ : Meromorphic functions, entire functions, shared values, differential polynomials, uniqueness.