A NOTE ON CERTAIN IDENTITIES INVOLVING GENERAL DOUBLE AND TRIPLE HYPERGEOMETRIC FUNCTIONS OF EXTON AND SRIVASTAVA

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Abstract: The main object of the present note is to obtain the generalizations and unifications of identities associated with hypergeometric function of one variable $_AF_B$ and Appell's hypergeometric function of two variables F_1, F_2, F_3, F_4 due to MacRobert and Sharma respectively, in the form of identities associated with multiple hypergeometric functions $\mathscr{H}$, G of Exton and $F^{(3)}$ of Srivastava.

Keywords and Phrases: Pochhammer's symbol; Multiplication formulae, Double and triple hypergeometric functions; Series iteration technique.

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1. Introduction

In 1967, a unification and generalization of Lauricella's fourteen complete triple hypergeometric functions of second order F_1, F_2, $\cdots$, F_{14} [8, pp. 113-114] including Saran's ten triple hypergeometric functions F_E, F_F, F_G, F_K, F_M, F_N, F_P, F_R, F_S,