International J. of Math. Sci. & Engg. Appls. (IJMSEA) ISSN 0973-9424, Vol. 6 No. II (March, 2012), pp. 39-45

ON SOME MULTIPLICATION FORMULAE FOR GENERALIZED HYPERGEOMETRIC FUNCTIONS

YASHWANT SINGH¹ AND HARMENDRA KUMAR MANDIA²

¹ Department of Mathematics, S. M. L. (P.G.) College, Jhunjhunu, India ²Department of Mathematics, Shri Jagdish Prasad Jhabermal Tibrewal University, Chudela, Jhunjhunu, Rajasthan, India

Abstract

In the present paper, the author establish two new and useful theorems for the generalized differential operator $D_{k,\alpha,x}^m$. As an application of our main results, we obtain two multiplication formulae for \overline{H} -function. Some known and new special cases are also given.

Key Words : Generalized hypergeometric function, Fourier series, \overline{H} -function, Multiplication formula, Riemann-Liouville fractional derivative.

2000 AMS Subject Classification : 33c99.

© http://www.ascent-journals.com