J. of Ramanujan Society of Mathematics and Mathematical Sciences Vol. 10, No. 2 (2023), pp. 77-100

DOI: 10.56827/JRSMMS.2023.1002.6 ISSN (Online): 2582-5461

ISSN (Print): 2319-1023

FRACTIONAL INTEGRATIONS FOR THE NEW GENERALIZED HYPERGEOMETRIC FUNCTIONS

M. P. Chaudhary, M. L. Kaurangini*, I. O. Kiymaz**, U. M. Abubakar* and E. Ata**

International Scientific Research and Welfare Organization (Albert Einstein Chair Professor of Mathematical Sciences)
New Delhi 110018, INDIA

E-mail: dr.m.p.chaudhary@gmail.com

*Aliko Dangote University of Science and Technology, Wudil P.M.B.: 3244 Kano, Kano STATE-NIGERIA

E-mail: kaurangini@kust.edu.ng, uabubakar@kust.edu.ng

**Department of Mathematics, Faculty of Arts and Science, Kirsehir Ahi Evran University, Kirsehir, TURKEY

E-mail: iokiymaz@ahievran.edu.tr, enesata.tr@gmail.com

(Received: Mar. 05, 2023 Accepted: Jun. 08, 2023 Published: Jun. 30, 2023)

Abstract: In this article, authors discussed about image formulas for the some new extended hypergeometric function using elementary properties of the fractional calculus integral operators. Furthermore, using integral transforms some image formulas are also established.

Keywords and Phrases: Beta function, SUM transform, Fox-Wright function, Saigo fractional operator, Pathway transform.

2020 Mathematics Subject Classification: 33B15, 33B20, 33C15.

1. Introduction and Definitions

Fractional calculus is a branch of mathematics that deals with the study of fractional order integrals and derivatives. Many real-life applications of fractional