

South East Asian J. of Mathematics and Mathematical Sciences
Vol. 15, No. 2 (2019), pp. 77-84

ISSN (Online): 2582-0850

ISSN (Print): 0972-7752

A NOTE ON ASYMMETRIC BILATERAL BAILEY TRANSFORM

Ashutosh Singh, Amit Kumar Singh* and Sunil Singh**

Department of Mathematics,
Tilak Dhari PG College, Jaunpur-222002 (UP), INDIA

E-mail : ashuaryan001@gmail.com

*Department of Mathematics,
Late V.P.S.S.J. Post Graduate College,
Kunda Bhairavpur, Sultanpur - 228131, UP, INDIA

E-mail : dramitsingh2013@gmail.com

**Department of Mathematics,
The Institute of Science, 15, Madam cama Road,
Fort, Mumbai-400032, Maharashtra, INDIA

E-mail: sunilsingh@iscm.ac.in

(Received: June 23, 2019)

Abstract: In this paper, making use of some known summation formulas for bilateral q -series and asymmetric bilateral Bailey transform, certain transformations and identities have been established.

Keywords and Phrases: Basic hypergeometric series, bilateral basic hypergeometric series, Bailey transform, symmetric bilateral Bailey transform, asymmetric bilateral Bailey transform, summation formula, transformation formula, identities.

2010 Mathematics Subject Classification: 33D15, 33B05.

1. Notations and Definitions

Let q be a complex number such that $0 < |q| < 1$, we define the q -shifted factorial for all integers k by