q-NATURAL TRANSFORMS OF CERTAIN q-HUMBERT FUNCTIONS

Tabinda Nahid, Mohd Saif* and Junesang Choi**

Department of Mathematics,
Aligarh Muslim University,
Aligarh - 202002, Uttar Pradesh, INDIA

E-mail : tabindanahid@gmail.com

*Department of Applied Mathematics, Faculty of Engineering,
Aligarh Muslim University, Aligarh - 202002, INDIA

E-mail : usmanisaif153@gmail.com

**Department of Mathematics, Dongguk University,
Gyeongju - 38066, Republic of KOREA

E-mail : junesang@dongguk.ac.kr

Abstract: The **N**-transform (so-called natural transform) of a function, which may combine Laplace and Sumudu transforms, has been introduced and investigated. Recently q-analogues of the **N**-transform has been presented and studied. Among q-extensions of a number of polynomials and functions, the q-Humbert functions and some of their interesting identities and properties have recently been introduced and provided. In this paper, we aim to present q-natural transforms of a finite product of the q-Humbert functions. Some particular cases of our main identities are also considered.