

GENERATION OF BASIC, BILATERAL AND BASIC
BILATERAL SERIES FOR B- FUNCTION

Anand Singh & H.S. Dhimi*

Department of Mathematics

University of Kumaun

Almora Campus,

Almora (U.P.) 263601 India

The present paper deals with the formation of basic, bilateral and basic bilateral series representations of our newly generated B- function and derivation of some of their properties.

Key words :- Complex number / Appell series / Lauricella function / Bilateral series.

1. INTRODUCTION

Interpreting a basic number as

$$a_q = \frac{1-q^a}{1-q} \dots\dots\dots (1.1)$$

where q and a are real or complex numbers, so that as

$$\text{as } q \rightarrow 1, \quad [(1-q^a) / (1-q)] \rightarrow a ;$$

the basic analogue of the Gauss series is defined as

$$1- \frac{(1-q^a)(1-q^b)}{(1-q^c)(1-q)} x + \frac{(1-q^a)(1-q^{a+1})(1-q^b)(1-q^{b+1})}{(1-q^c)(1-q^{c+1})(1-q)(1-q^2)} x^2 + \dots\dots\dots (1.2)$$

* To whom all correspondence be mailed