

SOME APPLICATIONS OF EXTENSION k -GAMMA, k -BETA FUNCTIONS AND k -BETA DISTRIBUTION

Indu Bala Bapna and Radhe Shyam Prajapat

Department of Mathematics,
M. L. V. Govt. PG College Bhilwara, Rajasthan, INDIA

E-mail : bapnain@yahoo.com, rpajapat71@yahoo.in

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Abstract: By Applying extension of k -Gamma and k -Beta functions we derive the interesting results with help k - Gamma and k -Beta functions involving elementary functions. Using extension of k -Beta distribution we will discuss the maximum likelihood estimators, central moments and some properties based on expectation. For real life application will be computed the hazard rate function, mean residue life function and entropy.

Keywords and Phrases: k -Gamma function, extension k -gamma function, k -Beta function, k -beta function central moment, Hazard Rate Function.

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1. Introduction

Many researchers are developing the fractional calculus theory and its applications with the help some special functions like Gamma, Beta, extended Gamma, extended Beta , k -Gamma, k -Beta, extended k -Gamma and extended k -Beta functions (Mathai et al [9] , Chaudhry et al [3], Daiz et al [4] Mubeen et al [12]) . Many problems of science and engineering can be evaluated by help these functions (Bapna at al [1], Krishnamoorthy [8]) Presently more researchers are working on k -Beta function and extension of k -beta function and these functions have more applications in mathematical analysis and pure statistics. The aim of this paper is to develop extended k -Beta and extended k -Gamma functions involving fractional