South East Asian J. of Mathematics and Mathematical Sciences Vol. 20, No. 2 (2024), pp. 453-462

ISSN (Print): 0972-7752

GENERALIZED MITTAG-LEFFLER TYPE POISSON DISTRIBUTION

P. Dixit, L. Gaurav, S. Porwal* and R. Agarwal**

Department of Mathematics, U.I.E.T. Campus, C.S.J.M. University, Kanpur - 208024, Uttar Pradesh, INDIA

E-mail: dixit_poonam14@rediffmail.com, leesagaurav@gmail.com

*Department of Mathematics, Ram Sahay Government Degree College, Bairi-Shivrajpur, Kanpur - 209205, (U.P.), INDIA

E-mail: saurabhjcb@rediffmail.com

**Department of Computer Applications, U.I.E.T. Campus, C.S.J.M. University, Kanpur - 208024, Uttar Pradesh, INDIA

E-mail: riteshagarwal@csjmu.ac.in

(Received: May 22, 2024 Accepted: Aug. 04, 2024 Published: Aug. 30, 2024)

Abstract: The main object of this paper is to introduce generalized Mittag-Leffler type Poisson distribution. We obtain results regarding moments about the origin, Moment generating function, probability generating function and characteristic function for this distribution. It should be worthy to note that the above results reduce to corresponding results of Mittag-Leffler type Poisson distribution and Poisson distribution for specific values of parameters.

Keywords and Phrases: Generalized Mittag-Leffler function, Poisson distribution, Moments, Moment generating function.

2020 Mathematics Subject Classification: 60E05.