

Abstract

Certain Univariate continuous Probability distribution have been discretized. Certain properties and applications of these distribution have been obtained. The probability mass function and probability generating function have been derived. Certain recurrence relations for probabilities have been derived. Survival function and cumulative distribution function have been derived. Hazard rate function, reverse hazard rate and second rate of failure rate function have been derived. Factorial moment generating function and its recurrence relation are obtained. Zero truncated form of the distribution is derived. Size biased and zero modified form of the distribution are also obtained. The distribution has been fitted to some well-known data set for testing its goodness of fit. A comparative study has been made based on its chi-square goodness of fit.

The thesis consists of seven chapters. Introduction is given in chapter 1. Discrete Janardan distribution and Its applications is given in chapter 2. Certain properties of Discrete Sushila distribution and Its application is discussed in chapter 3 Discrete quasi-Lindley distribution has been discussed in chapter 4. A new discrete quasi-Lindley distribution and its applications has been discussed in chapter 5. Two Parameter discrete Lindley distribution has been discussed in chapter 6. Discrete gamma Lindley distribution and its applications is discussed in chapter 7.