

ABSTRACT

The aim of this research is to study upper record values obtained from MBIII distribution. Firstly record times and RV are illustrated through real life data. We have observed some of its important properties which include pdf, cdf, moments about mean, central and inverse moments and cumulants. Reliability measures such as survival function and hazard function are discussed. Some of the central tendency measures i.e. mea and median are resulted. Dispersion measures such as co-efficient of skewness and co-efficient of kurtosis are also derived. For the better understanding, the plots of pdf, cdf, hazard function and survival function have been created. We studied the behavior of different parameters on distribution. The relationship among URMIII distribution and other distributions are reviewed. As many of the integrals of URMIII distribution is unsolvable, so we get the results of mean, variance, median, skewness and kurtosis numerically by using different combination of parameters.

The flexibility of URMIII distribution is studied through simulation study. Simulation study is conducted to examine the performance of distribution .The study comprises of parameter estimation obtained from random samples of RV. By taking 25 upper RV from 25 random samples of size 1 to 10 drawn from MBIII distribution, we get mean, variance, standard deviation, skewness, kurtosis and showed that how the difference between parametric value and estimated value gets closer to zero by increasing the sample size. Values of parameters are estimated and chi square is also estimated through simulation study. It is shown with the help of graphs that how the empirical data and fitted data come closer to each other by increasing the sample sizes.