Abstract

We have studied one of the most common distributions, namely, Lindley distribution, which is an important continuous mixed distribution with great ability to represent different systems. We studied this distribution with three parameters because of its high flexibility in modelling life data. The parameters were estimated by five different methods, namely, maximum likelihood estimation, ordinary least squares, weighted least squares, maximum product of spacing, and Cramér-von Mises. Simulation experiments were performed with different sample sizes and different parameter values. The different methods were compared on the generated data by mean square error and mean absolute error. In addition, we compared the methods for real data, which represent COVID-19 data in Iraq/Anbar Province.