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MOMENTS PROPERTIES OF EXPONENTIATED EXPONENTIAL-GEOMETRIC DISTRIBUTION BASED ON GENERALIZED ORDER STATISTICS

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SUMMARY

In this paper, exponentiated exponential-geometric distribution is considered. Some new explicit expressions for single and product moment of generalized order statistics based on a random sample drawn from the considered distribution are derived. The results for order statistics and upper records as special cases are obtained. Some new explicit expressions for marginal and joint moment generating functions of generalized order statistics are also derived. By using these relations to obtain the means and variances of order statistics and record values. Finally, we considered two characterization Theorems of this distribution based on the conditional expectation of generalized order statistics.

Keywords and phrases: Generalized order statistics; order statistics; record values; exponentiated exponential-geometric distribution; single moments; product moment; marginal and joint moment generating function and characterization.

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