

## Characterization of Continuous Distributions Through Conditional Expectation of Functions of Generalized Order Statistics

A. H. Khan\*, R. U. Khan, and M. Yaqub

Department of Statistics and Operations Research, Aligarh Muslim University, Aligarh 202002,  
India

### Abstract

A general form of continuous distribution is obtained by considering the conditional expectation of the functions of generalized order statistics and then characterizing relationships are established for distributions through generalized order statistics. Further, various deductions for order statistics, records, sequential order statistics and progressively censored samples are discussed.

**Keywords:** Generalized order statistics, order statistics, records, characterization of distributions, conditional expectation and continuous distributions.

**2000 Mathematics Subject Classification:** 62E15, 62E10, 62G30.

---

\*Corresponding author. Email Address: ahamidkhan@rediffmail.com