

An EOQ Model for Deteriorating Items with Weibull Time — Dependent Demand Rate under Trade Credits

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Abstract

This paper presents an inventory model for deteriorating items with Weibull distribution time dependent demand rate under permissible delay in payments. Mathematica software is used for finding optimal numerical solutions; computational procedures are proposed to find optimal cycle time, optimal order quantity and total relevant cost of all four cases. Numerical examples show the applicability of the model. Sensitive analysis shows that the results are quite sensitive with the variation of various parameters. Mathematical models have been discussed under four different situations.

Keywords: Inventory, deterioration, cash-discount, weibull distribution, demand rate.