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Inventory model for deteriorating items and time value of money for a finite time horizon under the permissible delay in payments

N. H. Shah

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Abstract

In this article, an inventory model is derived by assuming constant rate of deterioration of units in an inventory, time value of money under the conditions of permissible delay in payments. The optimal replenishments and fraction of cycle time are decision variables to minimize the present value of inventory cost over a finite planning horizon. The sensitivity analysis is carried out by a numerical example.

Keywords:

Economic order quantity (EOQ) | Deterioration | Time value of money | Permissible delay in payments

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