



AN INVENTORY MODEL FOR DETERIORATING ITEMS WITH STOCK-DEPENDENT DEMAND UNDER INFLATION AND TIME VALUE OF MONEY

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Abstract

In this article, an inventory model for deteriorating items with stock-dependent demand under money inflation and time value of money is proposed. Deterioration rate is considered as variable. In this model backlogging is partial and shortages are allowed. Numerical example is presented to illustrate the impact of various parameters of the system on the optimal solution. Finally, sensitivity analysis is applied for effectiveness of the model.

Key words : Inventory control, Stock dependent demand, Shortages, Non-instantaneous deterioration, Partial backlogging.