

## **INVENTORY MODEL FOR DETERIORATING ITEMS WITH INVENTORY DEPENDENT DEMAND RATE UNDER TRADE CREDITS**

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### SUMMARY

The purpose of this study is to investigate the impact of permissible delay in the inventory system. In a recent paper, Teng et al (2011) established an inventory model of optimal ordering policy for stock- dependent demand under progressive payment scheme. Motivated by Teng et al (2011) this paper develops an inventory model for deteriorating items have inventory-level dependent demand rate under trade credits. The deterioration is taken as constant. Mathematical models are derived under two different cases i.e. case I: The permissible delay period is less than or equal to the cycle time for settling the account and case II: The permissible delay period is greater than the cycle time for settling the account. Numerical examples are given to validate the proposed model. Sensitivity analyses with the variations of different parameters are provided to illustrate the proposed model.

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