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# ORDER LEVEL INVENTORY MODEL FOR PERISHABLE ITEMS WITH POWER DEMAND AND STOCK-DEPENDENT DEMAND UNDER VARIABLE COST FUNCTIONS

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## *ABSTRACT*

*In real practice, customers are influenced to purchase more items if there is adequate availability of the products. The present paper investigates an order level inventory model under two scenarios having power demand rate with inventory level dependent holding cost functions, and stock-dependent demand rate with time and inventory dependent holding cost functions. A constant rate of deterioration is considered into the two models. Shortages are not allowed in the present models. In each of the two sections, the optimum time, optimum order quantity and optimum average total cost are derived. The developed models are illustrated by two numerical examples and finally the sensitivity analysis for the optimal solutions towards the changes in the values of system parameters has been discussed.*

***KEYWORDS:*** *Inventory, Perishable, Power Demand, Stock-Dependent Demand and Cost Function*

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