

**INVENTORY MODEL FOR DETERIORATING ITEMS IN PRESENCE OF TRADE
CREDIT PERIOD, TIME DEPENDENT DEMAND RATE AND DETERIORATION
USING DISCOUNTED CASH FLOW APPROACH**

NEETU

PG Deptt. of Mathematics, APJ College of Fine Arts, Jalandhar.

Email : mannat_007ind@yahoo.co.in

ARUN KUMAR TOMER

PG Deptt. of Mathematics, SMDRSD College, Pathankot.

Email : tomert4@rediffmail.com

ABSTRACT

In this paper, we are using discounted cash flow approach for deteriorating items in the presence of trade credit period. Demand rate is time dependent and follows the power demand pattern. Shortages are not allowed and deterioration follows the Weibull distribution rate. Mathematical models are derived for three different cases : Instantaneous cash flows, credit only on units in stock, fixed credit period. Inflation and time value of money is also considered. Our approach is to find the optimal value of all future cash flows for three cases. Numerical examples are also given to illustrate the theoretical results. Sensitivity analysis of various parameters are also discussed.