

**DETERIORATING INVENTORY MODEL WITH LINEAR DEMAND AND VARIABLE
DETERIORATION TAKING INTO ACCOUNT THE TIME-VALUE OF MONEY**

NEETU (Asst. Professor)

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

Email : mannat_007ind@yahoo.co.in

ARUN KUMAR TOMER (Asst. Professor)

PG Deptt. of Mathematics, SMDRSD College, Pathankot.

Email : tomer14@rediffmail.com

ABSTRACT

Most works on inventory models do not consider deterioration, time-value of money and price-dependent demand factor. A deteriorating inventory model taking into account the time-value of money is developed for linear demand. Shortages are completely backordered and variable rate of deterioration is taken. The objective of this study is to enable the retailer to develop a policy which will ensure the largest net profit. Numerical examples are also given to support the theoretical results.