

A DETERMINISTIC INVENTORY MODEL FOR DETERIORATING ITEMS WITH ON-HAND INVENTORY DEPENDENT, QUADRATIC DEMAND RATE

P. D. PATEL¹, A. S. GOR² & PRAVIN BHATHAWALA³

¹Lecturer in Mathematics Government Polytechnic Palanpur, Gujarat, India

²Principal, Pramukh Swami Science & H D Patel Arts College Kadi, Gujarat, India

³Director School of IT, AURO University Surat, Gujarat, India

ABSTRACT

An infinite time horizon model for deterministic perishable items that follows quadratic demand rate, constant deterioration and without shortages is considered. An optimal production strategy is derived with maximization of profit. The result is illustrated with numerical example.

KEYWORDS: On-Hand Inventory, Replenishment Cost, Shortages, Variable Demand