

Table of Content

CHAPTER - 1 INTRODUCTION AND LITERATURE REVIEW	1
1.1 Introduction	2
1.2 Literature Review.....	5
1.3 Terminology	11
CHAPTER - 2 AN INVENTORY MODEL FOR WEIBULL DETERIORATING ITEMS WITH EXPONENTIAL DEMAND AND TIME-VARYING HOLDING COST	15
2.1 Introduction.....	16
2.2 Assumptions	16
2.3 Model Development	16
2.4 Examples.....	20
2.5 Sensitivity Analysis	22
2.6 Conclusion.....	28
CHAPTER - 3 AN INVENTORY MODEL FOR WEIBULL DETERIORATING ITEMS WITH EXPONENTIAL DEMAND UNDER PERMISSIBLE DELAY IN PAYMENTS ...	29
3.1 Introduction	30
3.2 Assumptions	30
3.3 Model Development.....	31
3.3.1 Case – 1: $M \leq T$	32
3.3.2 Case – 2: $M \geq T$	36
3.4 Examples	39
3.5 Sensitivity Analysis	41
3.5 Conclusion.....	46

CHAPTER - 4 JOINT PRICING ADVERTISEMENT AND INVENTORY POLICIES FOR DETERIORATING ITEMS UNDER TRADE CREDIT WITH SHORTAGES AND PARTIAL BACKLOGGING	47
4.1. Introduction	48
4.2 Assumptions	48
4.3 Model Development.....	49
4.3.1 Case 1: $0 \leq M \leq T_1$	52
4.3.2 Case 2: $T_1 \leq M \leq T$	54
4.4 Examples	58
4.5 Concavity	59
4.6 Sensitivity Analysis.....	62
4.7 Conclusion.....	71
CHAPTER - 5 AN INVENTORY MODEL FOR WEIBULL DETERIORATING ITEMS WITH PRESERVATION TECHNOLOGY INVESTMENT	72
5.1 Introduction	73
5.2 Assumptions	73
5.3 Model Development	74
5.3.1 Case-1: Instantaneous deterioration:	74
5.3.2 Case-2: Non-instantaneous deterioration	79
5.4 Examples	84
5.5 Concavity	84
5.6 Sensitivity Analysis	89
5.7 Conclusion.....	99
CHAPTER - 6 JOINT PRICING, ADVERTISEMENT, PRESERVATION TECHNOLOGY INVESTMENT AND INVENTORY POLICIES FOR NON-INSTANTANEOUS DETERIORATING ITEMS UNDER TRADE CREDIT	101

6.1 Introduction	102
6.2 Assumptions	102
6.3 Model Development.....	104
6.3.1 Case 1: $0 \leq M \leq T_d$	108
6.3.2 Case 2: $T_d \leq M \leq T_1$	110
6.3.3 Case 3: $T_1 \leq M \leq T$	113
6.4 Solution Methodology.....	115
6.5 Examples	119
6.6 Concavity and Optimality.....	123
6.7 Sensitivity Analysis	129
6.8 Conclusion	134
APPENDIX.....	135
BIBLIOGRAPHY.....	153
LIST OF PUBLICATIONS USED IN THIS THESIS	159
LIST OF CONFERENCES	160