

A P P E N D I X - II

Situation wherein software for probabilistic inventory models can be applied as follows .

FOR PROBABILISTIC MODEL I :-

The probabilistic distribution of monthly sale of a certain item is as follows.

Monthly Sales:	0	1	2	3	4	5	6
Probability :	0.01	0.06	0.25	0.35	0.20	0.03	0.10

The cost of carrying inventory is Rs.30.00 per unit per month & the cost of unit shortage is Rs.70 per month. Determine the optimum stock level which minimizes the total expected cost.

FOR PROBABILISTIC MODEL II :-

A baking company sells cake by the pound. It makes a profit of 50 paise. A pound sold on the day it is baked. It disposes of all cakes not sold on the date it is baked, at a loss of 12 paise a pound. If demand is known to be rectangular between 2000 and 3000 pounds, determine the optimum daily amount baked.

FOR PROBABILISTIC MODEL III :-

The probabilistic distribution of monthly sales of a certain item is as follows

Monthly sales:-	0	1	2	3	4	5	6
Probability :-	0.02	0.05	0.30	0.27	0.40	0.10	0.06

The cost of carrying inventory is Rs.10 per unit per month. The current policy is to maintain a stock of four items at the beginning of each month. Assuming the cost of shortage is proportional to both time and quantity shortage obtain the estimated cost of shortage of one item for one unit.