Single Period Problem with instantaneous demand.

- t is the cont interval by order.

- Q is the stock for live t

- r is the estimated demand at a discontinuous

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Prute with prob. P(r).

C, is hading cost for item Per to the unit

C, is hading cost for item Per to time int

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b/w 2000	empind is known for der	ermine me
ofti sem/	daily amount &	The state of the s
1	1 left	oners) 8
5% C1= R5/0	12 (sale of left)	le)
C2= 8/5 0	.50 (Profit on pa	dor b/w roos ad zero
madand	is rectafugi	dos you continous.
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grin	1 - 1-1	$a \leq x \leq b$
1	for) = ( to - of - of	otherwise
ON WAR	70'	
tructor(s) Signature		Head of Department (CS)
Dr. Khusro Mian	V 1	r. Jawwad Ahmed Shamsi
	0	etherwis Page 2/2

by P.d; 0 > 5 9 flw = cr otherwise

So few dr = for the rose

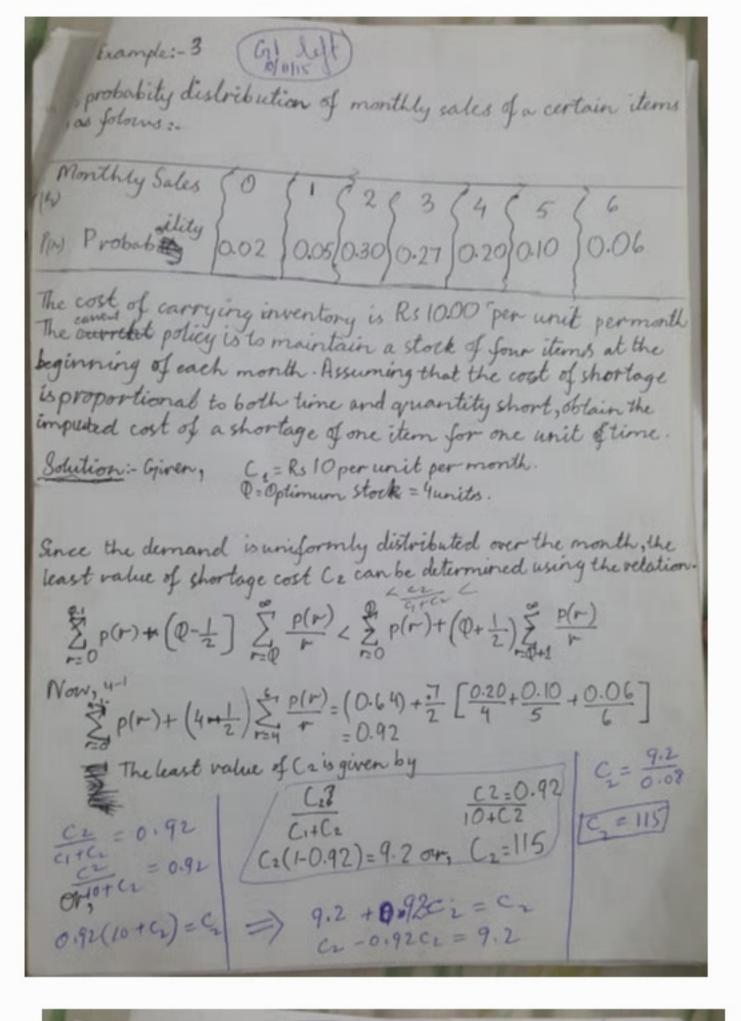
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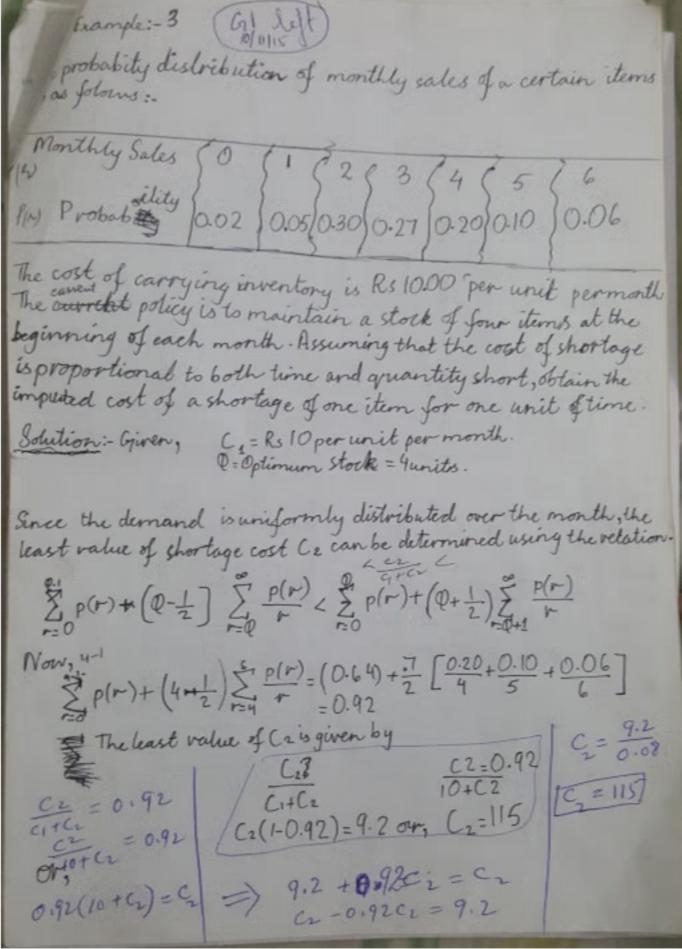
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- 0 + for dr = cr





Similarly the greatest value of Cz is ob	tained by consider
	*gthe optimum vot
$\frac{C_{1}}{C_{1}+C_{2}} = \sum_{r=0}^{21} p(r) + \left(4+\frac{1}{2}\right) \sum_{r=5}^{6} \frac{p(r)}{r}$	1/ 6
=(0.84)+9[0.10+0.06	Soffender San forder
= 0.975	Terrer
C2=0.975(10+C2)=>C2=Rs 390	
Hence, the range of shortage is given by	DD 5000 11
Rs1152Cz LRs 390.	Q2 Same if
Example 4.	<u></u>
Let the probability dosity of demand of a certain idem during a week be	31202692
$f(r) = \begin{cases} 0.10 \le r \le 10 \\ 0 \text{ otherwise} \end{cases}$	
This demand is assumed to occur with	
unit carrying cost of the item in inven	tory
be Rs 2.00 per week and unit shortage cost be Rs 8.00 per week. How will you	
determine the optimal order lettet of	DE1
the inventory Solution: Since f(r)=0.	1, Q Z r = 10, C = Rs 2.00
the inventory Solution: Since f(r)=0.	e optimum value of O can
111111111111111111111111111111111111111	- Jewish.
or, (0.1) [Q+Q[logr]0]=0.8	
ot, (0.1) LQ-Q3 log Q+(2.3) Q ] = 0.8	
or, 3.3Q-Q 200 Q-8=0)	obtained by trial and I
The solution of this equation Q=4.5 is:	errou method

Vociable   R. 1	(Q,R)	(S,R)
PUTE	(p,t)	(s,t)

The Production dep for a require 3600 kg of raw material for manufacturing a ferticular item Per year. It has been estimated that the cost of Placing an order is Rs 36 and the cost of cassying inventory is 25 percent of the investment in the inventories, the Price is Rs 10 per kg. the Purchase manager wish to determine an ordering Policy for the row material (Minimum yearly total cost).

D = 3600 kg year C<sub>8</sub> = R<sub>S</sub> 36 fer order C<sub>1</sub> =

