Surviver Resilemental of E	
Poisson Process (Branching process	of Posson mores
are also Pops	on processes)
65 0/3 0/2	
0.5 0.3 0.2 X X X X	
X X X X X X	mother process. Pobson
- X X X X X	with rate = 1
E LOCAL CONTRACTOR OF THE CONT	,
(x	Poisson with rate = 05
	10 DSIA WILL MIE = 03
X	Poisson with rate = 0,2
- Lange 1	
X	typey to collect
X	Possion with rate = 03
	997
La Independent Process.	Alexander de
· Druggendent (1106)	BASSA BEST CORPORA
Cur Pollage CD II	E PAGE SAME
Coupon Collector Problem	GEN BONS
P1 P2 P3 Pm	
	mother process,
XXXX	
	get a coupon
	Poisson with rate=I
/ X	getting type I coupon,
	Posson with rate = P1
X	March 48
X	gesting type in coupon,
	Poisson with rate = Pm
7110	PERFECTION
Les Independence Process.	1.146.

Survivor Representation of Expectation Let X be a nonnegative RV  $E[\chi] = \int_{-\infty}^{\infty} p(\chi > t) dt$ EX X = amout of time you need in order to collect ALL in expes of coupons P(X>t): up to time t, you have NOT collected All in types of coupons. 1-P(Xst)  $P(x \leq t) = \prod_{i=1}^{m} (1 - e^{-P_i t})$ I independent process => p(x>t) = 1 - II(1-elit)  $\Rightarrow \mathbb{E}[\mathcal{X}] = \int_{\mathcal{X}} (1 - \frac{m}{1!} (1 - e^{-P_i t})) dt$ PERFECTION