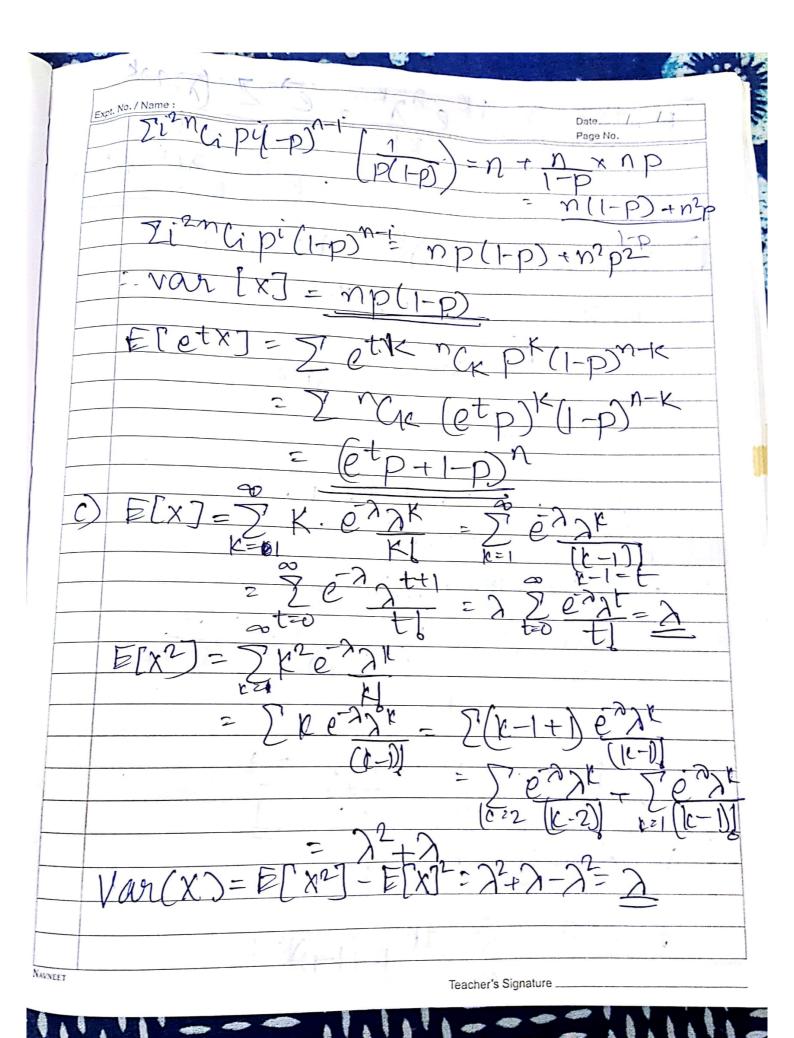
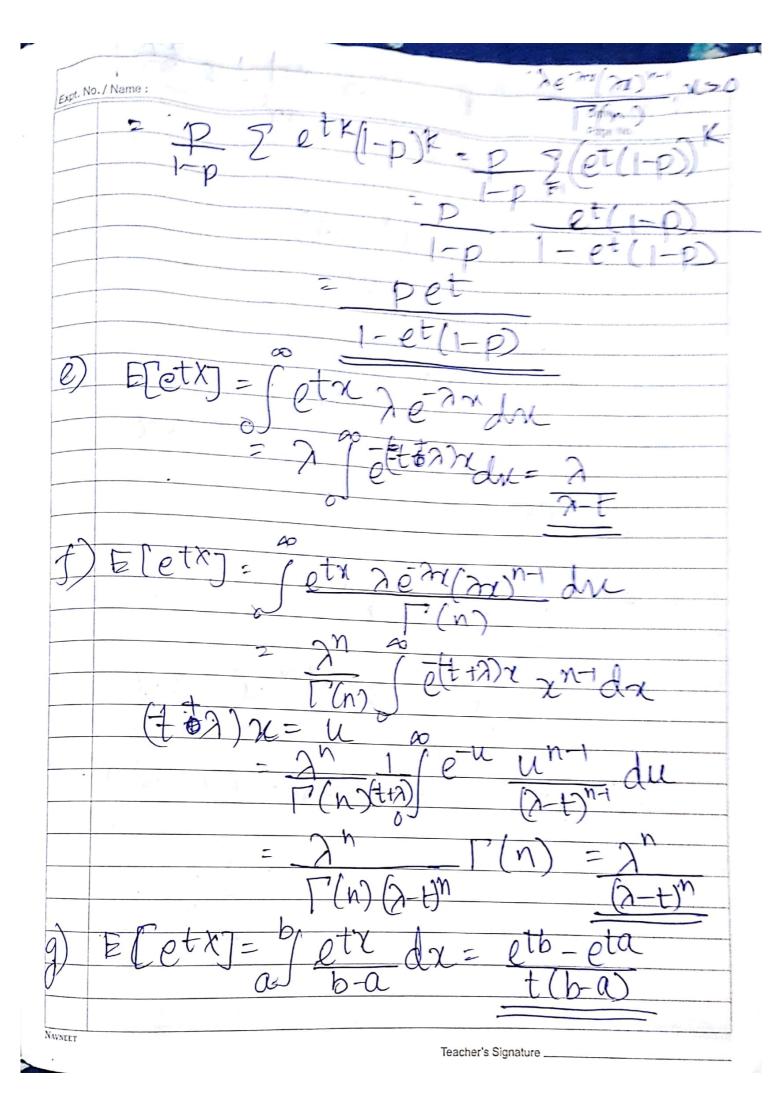


E[x] = 0x b + 0x (-b) = 5 @ var(x) = E(x2]-F[x]~ = 1xp+0x(1-p)-p2 2 p(1-p) b) E(x) = 2 0 1 1 (1-p) (1-p) n-i 1= 2 mapi ( - p) n-1 0 = 2 ncipi-1 (1-p)n-i - 2 n Ci (n-1)(1-p)-1-1 Di Praipie 2'all-porting 2°Ci (1-P) 1-Pi/p-1-P) = m E(x)= 2"(i)(1-p)" pi = np van[x] = [[x2] - [[x]]2 E[xº]= Zi2 Peipi (1-p)n-i Z'aili-pmipi=np 7 2ngi (iphp. p.n-i) (1-p) = n 2 2 reil ( IDIN 1(1-D) = n-tn2il

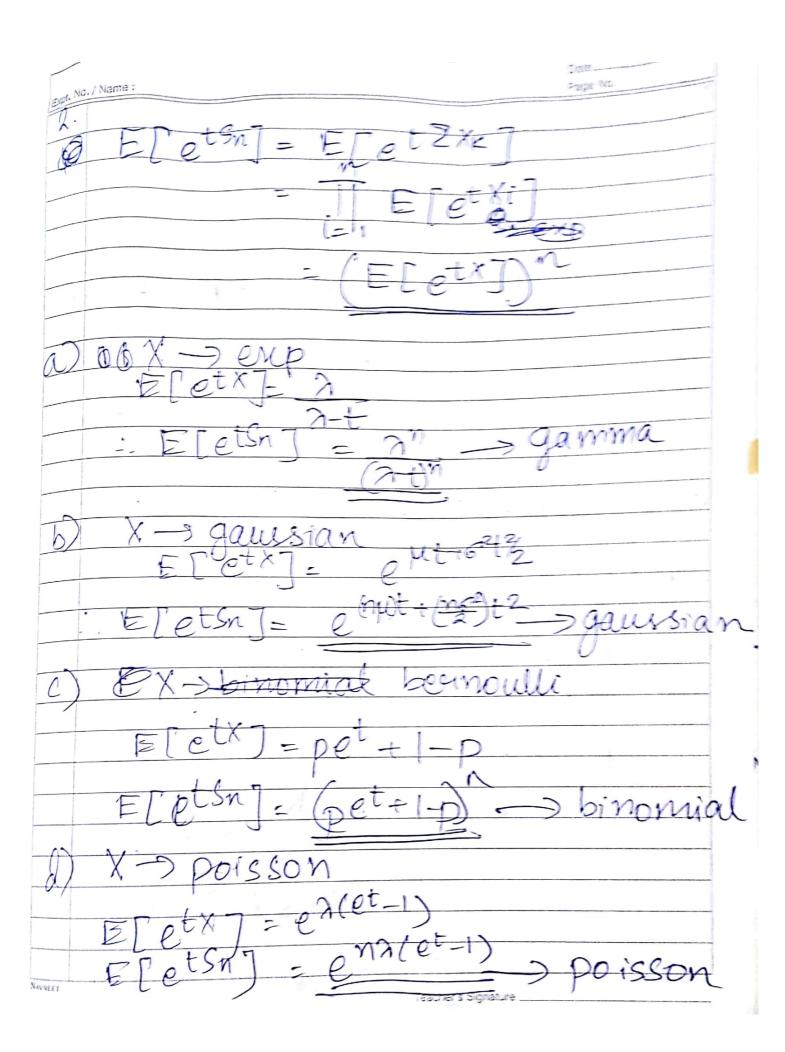


F[etx] = Zetx exx = e Z hets d) P(X=K)=p(1-p)K-1 L=1,2,3. E[x]= 5 K p(1-p)x-1 = P 2 K(1-p) K= 8= 1+2(1-p)3-(1-p)  $S = (1-p)^2 + 2(1-p)^3$ [1-1+p) S=17+(1-p)2+(1-p)3ps=(1-p)/1-1-D-P E[x]= P I-P P2 1-P P2 L2 p(1-P)K-1 E(etx) = 5 etk p (1-p)k-1

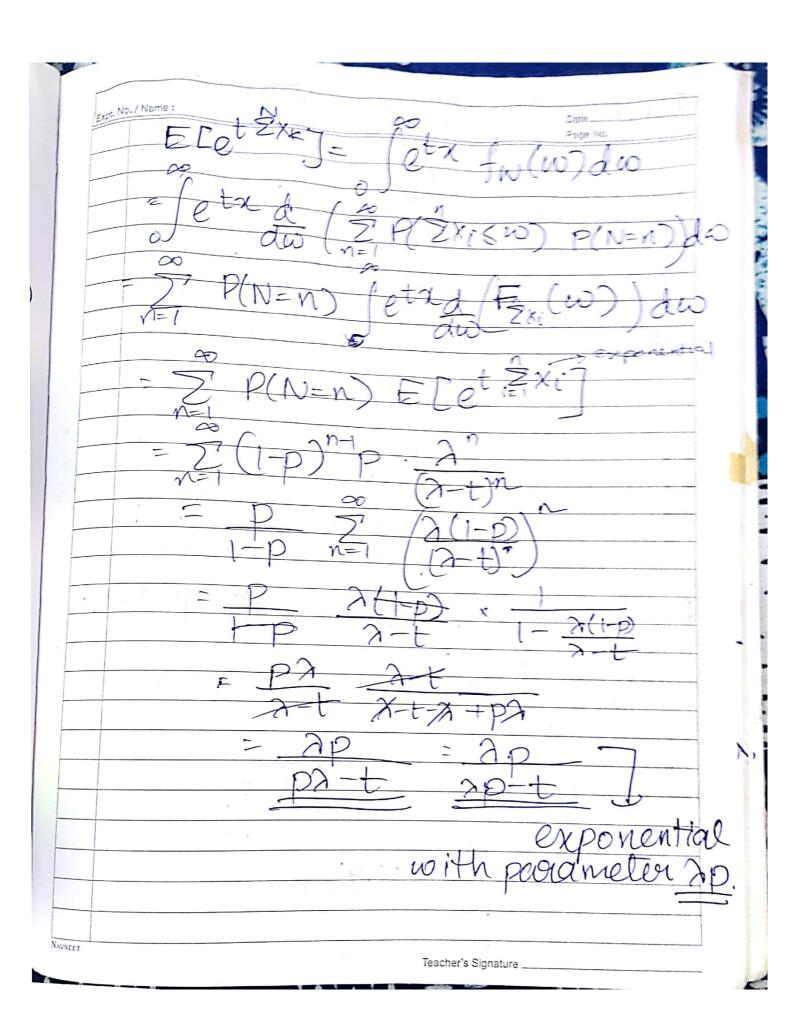


DECETY] = CTR | CTG2 262++210x-72-11-= 0 12 00 BERT-24) 7 - 75 LX j) Eletx J. Jeta Carada Head = Ca Joeta and da = Ca t x 1 d x = 2 El x J. = ga and due (d (x = 2)).

NAVNEET



butting more into it 1.  $f_{x}(x) = 1$ Fyly) = P(YEY) = P(-2logX < 4) = P(log X>, -y/2)=P(@X>, E%  $=\int_{0}^{1} dx = 1 - e^{-\frac{\pi}{2}}$ 2. p = probability bus has enough = BLet me get into  $b^{th}$  bus. pale  $p(N=K) = (1-p)^{K-1}p$ 1 et w denote waiting time. W= X, + x2... +XN- ZXi Fw(w)= P(WEW)=P(ZxiEW) = 2 P( DZXi Sw, N=n) = 27 P( 2 Xi < W, N=n) = 5 P(2Xis) P(N)



F\*(x)= 4n) = exactly Kor. vs are less than equal to 2 & rest are greater CK P(Y.VSX) P(Y.VX) = "Cr (Fx (nD)" (1-Fx(n))" E[P(X>1/4)] = [ # fy(y) P(X>1/4) dy-(Jy(y)= Je-7/4 ey du = ey (-yen/y) = et) (et P(X>10,4) dy
P(4). P(X>1,Y)dy AVNEET

