Assignment - III

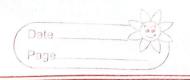
Ques 17 Assume that the probability of a defective component are grands. mly selected find the purbability that the first defect is caused by the seventh components tested. How many components do ejour expect to test until one is found to be defective?

Ques: 2. The Lifetime risk of developing parcueation cancer is about one in 78 (N28%). Let X= the number of people you ask before one say he or she has paracreatic cancer. The roundon roundle X is this case mely des only the number of brials that were failure and does not court the trial that wear a success in finding a berson who had the disease. The appropriate formula for dois random variable is the second one presented above. Then xis a discrete random nariable with a geometric distribution: X ~ G (1) or 8 00 G (0:0128).

Ques: 3 A baseball player has a batting average of 0.320. This is the general probability. It at he gets a hit each time he is at bat.

XV~ G (0.0128).

hehat is the peroposition that he gets his first hit in the shortd trip to bat?



Ques-4: There is an 80% chance that a Dalmation dog has 13 black spot. You go to a dog shape and count the dot on Dalmation herat is the probability that you will review the spots on 3 dogs before you find one that has 13 black spots?

Ques. 5: 1 The first fowe moments of a distoirbution about the value of 2 of the varie able are 1, 16 and - 40 respectively. Find the value of the first there moments about the origin.

Ques: 6: In a certain distribution, the first four moments about the point α = 4 are -1:5, 17, -30 and 308. Find the moment about mean and about origin. Also, Calculate β, and β2.

about the name 108. Find the moment of a distribution about the name 108. Find the moment about mean, about origin B, and B.

Also, find the moment about the point x = 2.

Dues. 8: Tind the mament generating function of the discrete poisson distribution given by $P(x) = e^{-\lambda} \cdot \lambda$. Also find the first precond moment about the Mean.



Que 9:4 find the moment generating function of the continues normal distrubution fines by $f(x) = \frac{1}{\sqrt{2}\sigma^2}(x-u)^2 - \infty < x < \infty$. Ques 10 You draw cards from a deck (with replace. ment) until you get four aces. herat is the chance that you will draw exact ly 20 times? Each year the April Anduarks have a 10% chance of winning the trophy in Chinchilla grooming. Their trophy case has space for fine trophies. Let y be the number of year until their case is full. Find the Mean and Standard deveation of 7. 10% of applicants for a job possess the right skills. A company has three position to fill, and they interview applicants one at a time tintil they fill all three position. (a) herat is the propositity that they will interview exactly to Applicants (b) hehat is the probability that they will interview atleast 10 Applicant

Our 13 The company from Ones. 12, takes there hours to Internew an unqualified applicant and five hows to interview Sandard derivation of the time to conduct all Our 14 You noll a die until you get four sixes (not neccessarily consecutive). What is the Mean and standard demation of the number of risels you will make ?