P1. Suppose that 10% of the population is left-handed. Find the Probability that in group of 20 individuals (each individual is either left handed or right handed) there will be exactly 3 left-handers.

P2. A survey of IIITK Students by the XYZ agency revealed that almost 80% disapprove the necessary attendance Criteria of the institute. If 10 students are selected at random and asked their opinion, find the probability that the number who disapprove the attendance Criteria is atmost 7.

P3) Let X be a binomial r.v with $E(X) = 9$ and $\text{Var}(X) = 4.95$. Find the value of $P(X = 12)$. [Hint: For Binomial r.v, X, $E(X) = np$, $\text{Var}(X) = npq$]

P4). A Satellite System consists of 10 components and can work properly if at least 4 of the 10 components are in working condition. If each component is independently in working condition with Probability 0.7, what is the Probability that the System works Properly?