

Practical 3

Question 1. Generate random numbers from the following distributions and draw their PMF/PDF and CDF.

- a. Binomial Distribution
- b. Poisson Distribution
- c. Geometric Distribution
- d. Negative Binomial Distribution
- e. Exponential distribution
- f. Normal distribution

Question 2. Generate random numbers from exponential distribution using inverse transformation method and draw its PDF and CDF. Also compare the simulated mean and variance values with the theoretical ones.

Question 3. Show with simulation that Poisson distribution is a limiting distribution of binomial distribution.

Question 4. Show with simulation that binomial distribution and Poisson distribution tend to normal distribution under certain conditions on the parameters.