Summary

- A sampling technique in which first unit is selected with a help of random numbers and the others get selected automatically according to some pre-designed pattern until the desired sample size is reached is known as systematic random sampling

- The principle of simple random sampling is that every object has the same possibility to been chosen

- A systematic sample is more precise than a simple Random Sample without replacement if the Mean square within the Systematic sample is larger than the population mean square

- Systematic sampling is precise when the units within the same sample are heterogeneous and is imprecise when they are homogeneous

- SRSWOR and Systematic Sampling are equally efficient when intra class correlation coefficient $\rho = \frac{-1}{(N-1)}$

- When $\rho = \frac{-1}{(N-1)}$, the two methods give the estimates of equal precision

- For $\rho < \frac{-1}{(N-1)}$, the estimate based on Systematic sampling is more efficient

- It was found in some of the experiments that efficiency of the systematic sampling can be increased if there is a trend in the values of population units