1. In a trivariate distribution if $r_{12} = 0.7,\ r_{13} = 0.16$ and $r_{23} = 0.4$ find all the multiple correlation coefficients. Also obtain the standard errors of estimates $\sigma_{1.23},\ \sigma_{2.13}\ and\ \sigma_{3.12}$ given that: $\sigma_1 = 1.86,\ \sigma_{2.15}\ and\ \sigma_3 = 3.46.$
2. From the data relating to the yield of dry bark (X_1), height (X_2) and girth (X_3) for 18 Mango plants, the following correlation coefficient are obtained $r_{12} = 0.77,\ r_{13} = 0.72\ and\ r_{23} = 0.52.$ Find the partial correlation coefficient $r_{12.3}$ and the multiple correlation coefficient $R_{1.23}$
3. What do you mean by large sample?
4. Mention foe tests of Large samples.