Glossary

1. **MGF :** Moment generating function which can be used to determine different order of moments such as mean, variance etc.

2. **Additve property :** Here, we try to find the distribution of addition of two or more independent and iid random variables.

3. **Limiting case :** Here we try to find the distribution of a random variable when n is large.

4. **Jacobian transformation :** It is used to find the distribution of a transformed random variable.

5. **β_1:** Beta distribution of I-kind.

6. **β_2:** Beta distribution of II-kind.

7. $s^2 = \dfrac{\sum\limits_{i=1}^{n}(x_i - \bar{x})^2}{n}$, sample mean square.

8. $S^2 = \dfrac{\sum\limits_{i=1}^{n}(x_i - \bar{x})^2}{n-1}$, Population mean square, which is an unbiased estimator of population variance σ^2.

9. **Degrees of freedom(d.f.):** Number of independent observations in the given set of data.

10. $\Gamma n = (n - 1)! = (n-1)\,\Gamma_{(n-1)}$.