

Glossary:

null hypothesis : is a term that often use to indicate the statistical hypothesis tested

Alternative hypothesis; Alternative to the null hypothesis

Missing value: while conducting the experiments some observations will be missed before taking the data, are termed as missing values

Principle of least squares;

A method of determining the value that best describes the relationship between expected and observed sets of data by minimizing the sums of the squares of deviation between observed and expected values

Analysis of Variance: breaking down of total variation into orthogonal components

ANOVA - a statistical method for making simultaneous comparisons between two or more means;

Model: Mathematical equation specified by theory

Treatment: Various objects of comparison in a comparative experiment are called treatments.

degrees of freedom"- number of independent values in the final calculation of a statistic

Blocks: With a randomized block design, the experimenter divides subjects into subgroups called blocks, such that the variability within blocks is less than the variability between blocks

SST- Total Sum of Square-Total variability in the data

SSE-Error sum of square=a sum of squares of the differences of the observations within treatments averages

SSTR – Treatment sum of squares-sum of squares of the differences between the treatment averages and the grand average

SSB – Blocksum of squares-sum of squares of the differences between the block averages and the grand average

ANOVA Table The results of the ANOVA are presented in an ANOVA table, which has columns labeled Sum of Squares , degrees of freedom, Mean Square, F-ratio and Sig.

Treatment effect The average **treatment effect** is a measure used to compare **treatments** in randomized experiments,

Block effect The average **block effect** is a measure used to compare **blocks** in randomized experiments,

Statistics: computed from sample data

Test Statistics: Quantity computed from sample data used to evaluate the plausibility of a restricted model