Topic: 2.2 – Analysis of Variance

Analysis of Variance. (ANOVA)

The analysis of Variance is a Powerful statistical tool for tests of significance.

The total variation in any set of numerical data is due to a number of causes which may be

Classified as (i) Assignable (ii) Chance

Defn: Analysis of variance is the separation of variance ascribable to one group of causes from the variance ascribable to other groups

It is nothing but an arithmetical procedure used to express the total variation of data as the sum of its non-negative components.

For the validity of F-test in ANOVA the following assumptions are made.

Various treatment:

SSC ⇒ Sum of Squares (Bt Columns)

TSS ⇒ Total Sum of Squares.

SST ⇒ Sum of Squares due to treatment

MSS ⇒ Mean Sum of Squares

SSE ⇒ Error Sum of Squares

SSR ⇒ Sum of Squares bt Rows.

C.F ⇒ Correlation factor

MSC ⇒ Mean sum of Squares (bt colum

MSE ⇒ Mean Sum of Squares (within clmn)

MSR – Mean Sum of Squares (Bt rows)