MEASURES OF CENTRAL TENDENCY

A numerical value which represents (approximately) the entire statistical data is called a measures of central tendency. The numerical value which represents the entire statistical data is neither the lowest nor the highest values in the data rather it lies in between the two extreme values of the data.

The different ways of measuring a central tendency are :

(1) Mean
(2) Median
(3) Mode.

(1) **Mean** : The arithmatic mean of n variable $(x_1, x_2, x_3 \cdots x_n)$ is given by the formula :

$$\text{Mean} = \frac{x_1 + x_2 + x_3 \cdots x_n}{x_n} = \frac{\Sigma x_i}{n}$$

It gives average of the data series.

Example 1 :

Q) The marks obtained by 12 children in a maths test are 11, 07, 19, 13, 18, 21, 09, 05, 20, 17, 16, 21. Find the mean marks.

Ans:

Sum of marks of all children = 11 + 7 + 19 + 13 + 18 + 21 + 9 + 5 + 20 + 17 + 16 + 21

= 177.

$$\text{Mean of Marks} = \frac{\text{Sum of Marks}}{\text{Total students}} = \frac{[\Sigma x_i]}{[n]}$$

$$= \frac{177}{12} = 14.75$$