Reference Section

χ – **Mean or average**

$\bar{\chi} = \dfrac{\sum x}{n}$ – **Deviation from the mean**

– **Standard deviation**

$d = |\bar{\chi} - \chi|$

– **% Coefficient of variation**

$s = \sqrt{\dfrac{\sum d^2}{n-1}}$

$c \text{ of } v(\%) = \dfrac{s}{\chi} \times \dfrac{100}{1}$ – **Range**
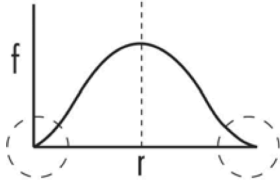
$r = $ (difference between highest & lowest result)   – **Frequency**

$f = $ (no of times any test result occurs)   – **Normal distribution**

NB:
To gain information about the population from samples taken from the population.

A: Samples taken must accurately represent the population otherwise information and decisions taken may be incorrect.

B: Results should be statistically analysed and quoted only to the level of accuracy to which they have been measured.

TO CALCULATE C.V% ON A CALCULATOR

(A) Enter the calculator into the STATS mode.

(B) Enter each number required for the calculation into the calculator using the $\sum$ or DATA function to enter each number.

(C) After entering all the numeric values obtain the MEAN $\sum$ and record.

(D) Obtain the Standard Deviation by pressing the S.D. (6th) function and record.

(E) Divide the Standard Deviation by the mean.

(F) Multiply by 100 to obtain the coefficient of Variation % – C.V.%.