Statistics

Definitions

(i) Range = U. L – L. L

(ii) CI $= \frac{\text{Range}}{\text{No. of classes}}$

(iii) Discrete : Fixed magnitude
eg :- 10, 20, 25

(iv) Continuous = Magnitude not fixed
eg :- 10 – 20 , 20 – 30

Collection of Data

(i) Primary Data :
Data collected himself

(ii) Secondary Data :
Data cellected by
Person or society.

Measure of Centre Tendency

(i) Mean $= \frac{\text{Sum of observation}}{\text{No. of observation}}$

(ii) Median = middle observation

n = odd

$\text{Median} = \left(\frac{n+1}{2}\right)^{th}$

n = even

$\text{Median} = \frac{\left(\frac{n}{2}\right)^{th} + \left(\frac{n+1}{2}\right)^{th}}{2}$

(iii) Mode = observation with max. freq.

Empirical Relation b/w mode, median, mean

Mode = 3 median – 2 mean

Classification

Frequency Distribution

(i) Discrete freq.

Wages	No.
4000	10
6000	8
8000	5
11000	7

(ii) Continuous freq.

CI	No.
0 - 5	72
5 - 10	103
10 - 15	50
15 - 20	25

Cumulative Frequency

(i)Discrete freq.

Wages	No.	CF
4000	10	10
6000	8	18
8000	5	23
11000	7	30

(ii) Continuous freq.

(a) Less than

CI	Less Than	CF
0 - 5	5	72
5 - 10	10	175
10 - 15	15	225
15 - 20	20	250

(b) More than

CI	More Than	CF
0 - 5	0	250
5 - 10	5	178
10 - 15	10	75
15 - 20	15	25

Graphical Representation

(i) Bar graph

Heads	Erpenditue
Gracery	4
Rent	5
Medicine	2
Fuel	2

(ii) Histogram

CI	No.
0 - 5	72
5 - 10	103
10 - 15	50
15 - 20	25

(iii) Frequency Polygon

CI	Freq.
20 - 30	8
30 - 40	12
40 - 50	17
50 - 60	9