

BCA - 2<sup>nd</sup> Year

3<sup>rd</sup> semester

Statistics



## UNIT-1

### Population, Sample, Data Condensation

#### \* Definition of Statistics :-

Statistics in the plural sense, Acc/ to W.L. Bowley, "Statistics are numerical statement of facts in any department of inquiry placed in relation to each other."

✓ According to this definition the characteristics of statistics are :-

- 1)- It facts must be in the form of numerical terms.
- 2)- The facts must be capable of being placed in relation to each other.
- 3)- It may be related to any field like physical, social or nature.

#### \* Characteristics / scope of statistics :-

- 1- Statistics are numerically expressed.
- 2- Statistics are aggregate of fact.
- 3- Statistics are estimated according to reasonable standard of accuracy.
- 4- Statistics is affected to a marked extent by multiplicity of causes.



5- Statistics are collected in a systematic manner.

6- Statistics are placed in relation to each other.

★ Functions of Statistics :-

1- Simplifies the data

2- Comparison of fact

3- Formation of policies and decision making.

4- Correction.

5- Forecasting for the future.

6- Testing a hypothesis.

★ Population :-

According to G. K. Galton in statistical usage the term population thus not necessarily refer to people but it is a technical term used to describe the complete group of person or objects for which the result are to apply!

★ Sample :- It is a part of population selected by some sampling procedure



the no. of units in the sample is called the size of the sample.

\* collection of data :-

There are two types of data :-

1- Primary data - Primary data are based on primary source of information these collected by investigator, either on his own through some agencies for the purpose. It is also known as raw data. The investigator gets the primary data which not being earlier processed, processed, grouped, average and summarized.

✓ Difference b/w Primary data and Secondary data -

1- Originality :-

- Primary data are collected originally.
- Secondary data are already available and thus they are not original.



(ii) Collection :-

- Collected by the Investigator himself.
- Collected by some other people.

(iii) Objective :-

- Collected by the Investigator according to the object of the survey.
- Used and adjusted by the person according to the object.

(iv) Time :-

- It is a time consuming to collect a primary data.
- Less time consuming.

(v) Point of Shape :-

- A primary data is in the shape of raw material.
- A secondary data is in the shape of either working process or finished material.



Ques:- C.I

1-10 5

11-20 7

21-30 8

31-40 10

C.I	F	CF	Tally Mark
0.5 - 10.5	5	5	
10.5 - 20.5	7	12	
20.5 - 30.5	8	20	
30.5 - 40.5	10	30	

Q:-

C.I less than 10 2

" 20 10

" 30 12

" 40 5

" 50 1

C.I.	F	C.F.
0 - 10	2	2
10 - 20	10	12
20 - 30	12	24
30 - 40	5	29
40 - 50	1	30