Statistics Assignment-1

Q.1:- What exactly is the difference between descriptive and inferential statistics?

⇒1. Descriptive Statistics is a discipline which is concerned with describing the population under study.
Inferential statistics is a type of statistics, that focuses on drawing conclusion about the population.

2. Descriptive Statistics collects, organize, analyze and present data in a meaningful way.
Inferential statistics compares data test hypothesis and make prediction.

3. Descriptive works on charts, Graphs and graphs for result and Inferential provides result in a the form of probability.
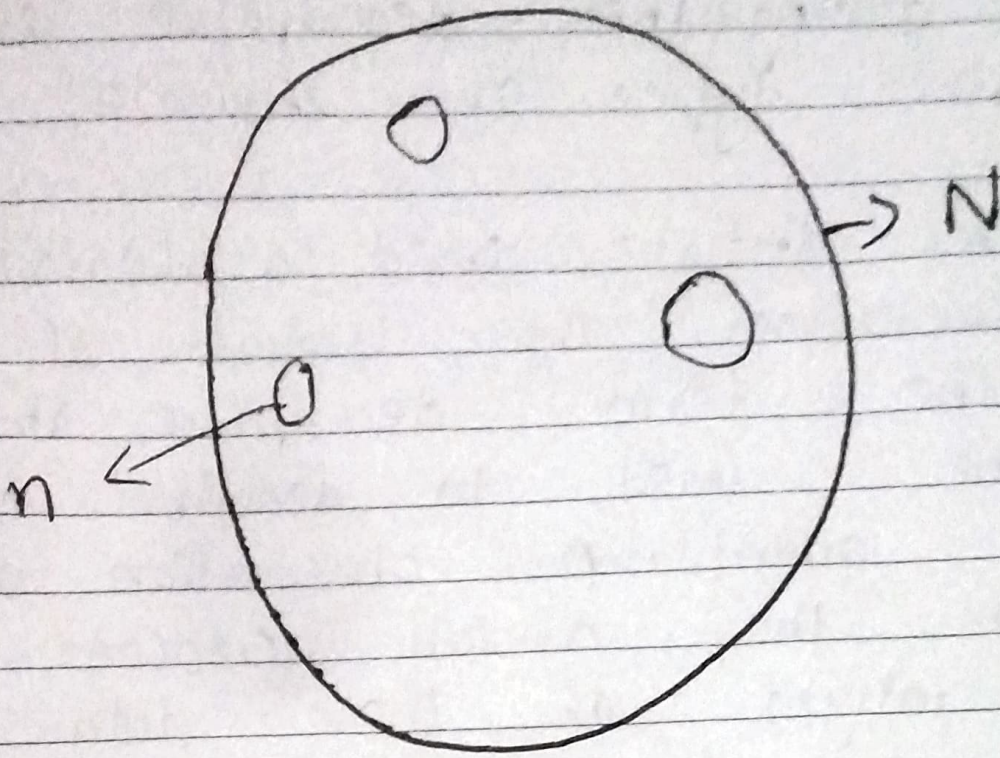
4. Descriptive statistics describe a situation while inferential statistics explains the likelyhood of the occurance of an event

5 Descriptive explains data to summarize the sample while inferential statistics attempts to reach the conclusion to learn about the population; that entends beyond the data available.

Q2. I'm not sure what is the difference between a sample and a population?

⇒ The population data is collection of huge data, or we can say the simplest and largest dataset. while sample dataset is a sample of the entire population to do some experiment on it, since experiment on population dataset can be time taking, it is better to use sample dataset.

Let N be the population data of size 100K and Let's take n as the sample data of size 10K maybe.

3. What distinguishes descriptive statistics from other types of statistics?

=) Descriptive statistics used to describe the characteristics or features of dataset. The term 'descriptive statistics' can be used to describe both individual quantitative observation as well as the overall process of obtaining insight of these data. We can use descriptive statistics to describe both an entire population or an individual sample.

It works with measure of Central tendency (mean, median, mode) and measure of dispersion (Standard Deviation & variation) to get the detailed understandable insight of data.

d. what is the difference between quantitative and qualitative data?

⇒ Quantitative data is number-based countable or measurable. Qualitative data is categorical variable.

⇒ Quantiative data tells us how many how much or how often in calculation. Qualitative data can help us to understand why, how or what happened behind certain behaviour.

⇒ Quantiative data is fixed and universal. Qualitative data is subjective and unique

⇒ Quantitative research methods are measuring and counting. Quanlitative research method are interviewing and observing.

⇒ Quantitative data is analyzed using statistical analysis. Qualitative data is analysed by grouping the data into categorical and theme.

Q.5. What is the definition of a percentile

-)

A percentile is a value below which a certain percentage of observation lie.

Ey:-

Sol: 1, 2, 3, 4, 5, 5, 5, 6, 7, 8, 8, 8, 8, 8, 9, 9, 10, 11, 11, 12

What is the percentile ranking of 10?

$$\text{Percentile Rank of } n = \frac{\# \text{ total value below } n}{n} \times 100$$

$$= \frac{16}{20} \times 100$$

$$= 80\%.$$