Assignment Questions

Ques 1 What exactly is the difference b/w descriptive and Inferential Statistics?

Ans 1

Descriptive Statistics	Inferential Statistics
① It summarize the characteristics of a data set.	It allows you to test a Hypothesis or assess whether your data is generalizable to the broader Population
② Eg:- Measure of central tendency and Measure of Dispersion	Eg: Z test, t-test, F-test etc.

Ques 2 Difference b/w sample and a population?

Ans

Population	Sample
① It is the entire group that you want to draw conclusion about.	It is the specific group that you will collect data from
	Size of sample is always less than the total size of population
② Eg: All countries of the world	Countries with published data available on birth rates & GDP since 2000.

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Ques3 What distinguishes descriptive statistics from other types of statistics?

Ans It summarize & organize characteristics of a dataset.
~~A data set is a collection of responses or observations from~~

3 types of descriptive statistics

① Distribution - Concerns the frequency of each value.

② Central Tendency - Concerns the average of the values
- ↳ Mean
- ↳ Median
- ↳ Mode

③ Variability / Dispersion - concerns how spread out the values are
- ↳ Variance
- ↳ Standard Deviation
- ↳ Range

Ques4 What is the difference b/w quantitative and qualitative data?

Ans

	Quantitative Data	Qualitative Data
①	Numbers-based, countable, or measurable (Discrete/Continuous)	Interpretation-based, descriptive and relating to language (Categorical)
②	Tells us how many, how much, or how often in calculation	Can help us understand why, how or what happened behind certain behaviour.

③	Fixed & Universal	Subjective and Unique
④	Quantitative research methods are measuring & counting	Research methods are interviewing & observing
⑤	Analyzed using statistical analysis	Analyzed by grouping the data into categories & theme
⑥	Eg:- Gender & Religion etc	Eg:- Age & Weight etc

Ques 5 What is the definition of a Percentile?

Ans Measure used in statistics indicating the value below which a given percentage of observation in a group of observation fall.

Eg:- 20th percentile is the value below which 20% of the observation may be found.

Formulae

$$\text{Percentile value of } x = \frac{\text{No. of values below } x}{n} \times 100$$