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**Statistics Assignment- 1**

**Q1- What exactly is the difference between descriptive and inferential statistics?**

**Ans--**

|  |  |
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| **Descriptive Statistics** | **Inferential Statistics** |
| Descriptive Statistics is a branch of statistics which is concerned with describing population under study. | Inferential Statistics is a type of statistics, that focuses on drawing conclusions about the population, on the basis of sample analysis and observation. |
| It is used to describe a situation | It is used to explain the chances of occurrence of an event |
| It explains the data, which is already known, to summarize sample. | It attempts to reach the conclusion to learn about the population, that extends beyond the data available. |
| It organizes, analyze and present data in a meaningful way. | It compares, test and predicts data. |
| It is used to create Graph, Charts and Tables. | It is used in Probability. |

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

**Ans-**

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| --- | --- |
| **Population** | **Sample** |
| Population refers to the collection of all elements possessing common characteristics, that comprises universe. | Sample means a subgroup of the members of population chosen for participation in the study. |
| Identifying the characteristics. | Making inferences about population. |
| Complete enumeration or census | Sample survey or sampling |
| It includes each and every unit of the group. | It includes only a handful of units of population. |
| The measurable quality is called Parameter. | The measurable quality is called Statistic. |
| Reports are true representation of opinion. | Reports have a margin of error and confidence interval. |

**Q3- What distinguishes descriptive statistics from other types of statistics?**

**Ans-** Descriptive statistics uses the data to provide descriptions of the population, either through numerical calculations or graphs or tables. Inferential statistics makes inferences and predictions about a population based on a sample of data taken from the population in question.

**Q4- What is the difference between quantitative and qualitative data?**

| **BASIS FOR COMPARISON** | **QUALITATIVE DATA** | **QUANTITATIVE DATA** |
| --- | --- | --- |
| Meaning | Qualitative data is the data in which the classification of objects is based on attributes and properties. | Quantitative Data is the type of data which can be measured and expressed numerically. |
| Research Methodology | Exploratory | Conclusive |
| Approach | Subjective | Objective |
| Analysis | Non-Statistical | Statistical |
| Collection of data | Unstructured | Structured |
| Determines | Depth of understanding | Level of occurrence |
| Asks | Why? | How many or How much? |
| Sample | Small number of non-representative samples | Large number of representative samples |
| Outcome | Develops initial understanding. | Recommends final course of action. |

**Q5- What is the definition of a percentile?**

**Ans-**  A value on a scale of 100 that indicates the percent of a distribution that is equal to or below it a score in the 95th percentile.