Q1

Statistics is a mathematical science including methods of collection,organising & analysis the data in such a way that meaningful conclusion can be made.

Q2 there are two types of statistics such as;-1)Descriptive 2)Inferential Descriptive:-It consists of organizing,summarizing the finite data. Examples include percentages, measures of central tendency (mean, median, mode), measures of dispersion (range, standard deviation, variance), and correlation coefficients. Inferential:-It consists of data you have measured to form a conclusion. Examples include regression analysis, confidence ranges, and hypothesis testing.

Q3 1.Nominal:- nominal data has no inherent order or ranking. Examples of nominal data include gender (male/female), race (White/Black/Asian), religion (Christianity/Islam/Judaism), and blood type (A/B/AB/O). 2.Ordinal:-Ordinal data is a type of data that consists of categories that can be ordered or ranked.Examples of ordinal data include education level (elementary/middle/high school/college),job position(manager/supervisor/employee),and Likert scales (strongly agree/agree/disagree/strongly disagree). 3.Interval:- data is a type of data that consists of numerical values where the distance between each value is equal.uch as temperature, dates, and time. Examples of interval data include temperature (Celsius/Fahrenheit), dates (days/months/years), and time (hours/minutes/seconds). 4.Ratio:-Ratio data is a type of data that has a true zero point and an equal distance between each value. Ratio data is considered the most informative type of data because it can be used to make meaningful comparisons and calculations. In addition, ratio data can be used to perform all types of statistical analyses.Ex:-Examples of ratio data include height (inches/centimeters), weight (pounds/kilograms), income (dollars), and distance (miles/kilometers).

Q4 1)Qualitative data 2)Qualitative data 3)Quantitative data 4)Quantitative data

Q5 Levels of Measurement:-1.Nominal Scale data 2.Ordinal Scale data 3.Interval scale data 4.Ratio Scale data.

1.nominal S.data:-You can categorize your data by labelling them in mutually exclusive groups, but there is no order between the categories.Ex:gender,colours. 2.ordinal S. data:-You can categorize and rank your data in an order, but you cannot say anything about the intervals between the rankings.Ex:Top 5 Olympic medallists Language ability (e.g., beginner, intermediate, fluent) 3.interval S. data:-You can categorize, rank, and infer equal intervals between neighboring data points, but there is no true zero point.Ex:-Test scores (e.g., IQ or exams)Personality inventories,Temperature in Fahrenheit or Celsius. 4.Ratio S.data:-You can categorize, rank, and infer equal intervals between neighboring data points, and there is a true zero point.EX:-Height,Age,Weight,Temperature in Kelvin

Q6 It is important to understand the level of measurement of variables in research, because the level of measurement determines the type of statistical analysis that can be conducted, and, therefore, the type of conclusions that can be drawn from the research.

Q7 Nominal and ordinal are two of the four levels of measurement. Nominal level data can only be classified, while ordinal level data can be classified and ordered.While Nominal Data is classified without any intrinsic ordering or rank, Ordinal Data has some predetermined or natural order. Nominal data is qualitative or categorical data, while Ordinal data is considered “in-between” qualitative and quantitative data.

Q8 Histograms are used in statistics, business and economics where numerical data plays a crucial role. A typical histogram looks like a bar chart. However, a bar chart provides comparisons of fixed values of a category, while in a histogram, each bar represents a range of value such as age in the range of 25-40.

Q9 Descriptive Stattistics:- It consists of Organising,Summarizing the finite data.For example the sample mean and standard deviation provide estimates of the equivalent population parameters. Inferential Statistics:-t consists of data ypu have measured to form a conclusion.Standard test statistics like t and z, for a given data generating process, where the null hypothesis is false, the expected value is strongly influenced by sample size. Most researchers would not see such statistics as estimating a population parameter of intrinsic interest.

Q10

The four measures of central tendency are mean, median, mode and the midrange. Here, mid-range or mid-extreme of a set of statistical data values is the arithmetic mean of the maximum and minimum values in a data set.

1.Mode:-The mode is the most commonly occurring value in a distribution. Consider this dataset showing the retirement age of 11 people, in whole years: 54, 54, 54, 55, 56, 57, 57, 58, 58, 60, 60. 2.Median:-The median is the middle value in distribution when the values are arranged in ascending or descending order.The median divides the distribution in half (there are 50% of observations on either side of the median value). In a distribution with an odd number of observations, the median value is the middle value. 3.Mode:-The mean is the sum of the value of each observation in a dataset divided by the number of observations. This is also known as the arithmetic average. Looking at the retirement age distribution again: 54, 54, 54, 55, 56, 57, 57, 58, 58, 60, 60.The mean is calculated by adding together all the values (54+54+54+55+56+57+57+58+58+60+60 = 623) and dividing by the number of observations (11) which equals 56.6 years.

In [ ]: