Ayesha stats test

25-question test for Descriptive statistics: (30 mins)



Introduction to Statistics

**1. What is the primary difference between a parameter and a statistic?**

A)a) Parameters describe populations, while statistics describe samples.

**2. Which of the following is an example of unstructured data?**

A)b) Images collected from social media.

**3. Categorical data can be further classified into:**

A)c) Discrete and continuous data.   
**4. Which of the following is NOT a characteristic of structured data?**

A)d) Difficult to analyze with statistical tools.

**5. What type of data is represented by the "number of cars owned by a family"?**

A)c) Discrete

Descriptive Statistics: Measures of Central Tendency

**6. What measure of central tendency is most affected by extreme values (outliers)?**

A)a) Mean

**7. If the mean and median of a dataset are equal, the data is likely to be:**

A)c) Symmetrically distributed.

**8. Which measure of central tendency is appropriate for categorical data?**

A)c) Mode

**9. A dataset has values 2, 2, 3, 4, and 10. What is the median?**

A)b) 3

10). The mode of a dataset is defined as:

A)b) The most frequently occurring value.

Descriptive Statistics: Measures of Dispersion

**11. What is the formula for calculating the range of a dataset?**

A)a) Maximum value −Minimum value

**12. Standard deviation is a measure of:**

A)b) Variability or dispersion.

**13. What does a high coefficient of variation indicate?**

A)b) High relative variability.

**14. What is the interquartile range (IQR)?**

A)a) Difference between the first quartile (Q1) and third quartile (Q3).

**15. A dataset has a standard deviation of 0. What does this mean/**

A)c) Both a and b.

Descriptive Statistics: Correlation and Skewness

**16. A correlation coefficient of -1 indicates:**

A)b) Perfect negative correlation.

**17. Positive skewness in a dataset means**

A)a) The tail is longer on the right side.

**18. What does kurtosis measure in a dataset?**

A)c) The sharpness of the peak of a distribution.

**19. What is the range of the correlation coefficient (r)?**

A)b) -1 to 1

**20. Which of the following indicates the strongest correlation?**

A)b) ( r = -0.85 )   
Descriptive Statistics: Five Point Summary and Visualization

**21. What are the components of the five-point summary?**

A)b) Minimum, Q1, median, Q3, and maximum.

**22. What type of chart is best for visualizing the distribution of a numerical dataset?**

A)b) Histogram

**23. Which visualization is best for identifying outliers?**

A)a) Box plot   
**24. What does a positively skewed box plot look like?**A)b) The median is closer to Q1, with a longer tail on the right

**25. Scatter plots are primarily used to:**

A)b) Display correlation between two variables.

s