-:STATISTICS WORKSHEET-1 ANSWER:-

1) A- True

2) A- Central Limit Theorem

3) B- Modeling bounded count data

4) C- The Square of a standard normal random variable follows what is called chi-squared distribution.

5) C- Poisson

6) B- False

7) B- Hypothesis

8) A- 0

9) C- Outliers cannot conform to the regression relationship.

10) Normal Distribution:- The normal distribution, also known as the Gaussian distribution, is a type of continuous probability distribution in statistics. It's the most commonly encountered distribution in statistics and appears frequently in natural phenomena and scientific data.

11) Handling missing data:-

- Deletion:
    - Remove rows or columns with missing values (listwise or pairwise deletion).
    - Use cautiously as it can reduce sample size and introduce bias.
- Imputation:
    - Replace missing values with plausible estimates.
    - Choose techniques based on data characteristics and analysis goals.

Some Imputation Techniques in Statistics:-

- Mean/Median/Mode Imputation
- Regression Imputation
- K-Nearest Neighbors (KNN) Imputation
- Multiple Imputation

12) A/B testing:- It is also known as split testing, is a type of controlled experiment commonly used in statistics and decision-making, particularly in marketing. It allows us to compare the effectiveness of two or more variations of a variable to see which one performs better based on a predetermined metric.

13) No.

14) Linear Regression:- Linear regression is a statistical method used to model the relationship between a dependent variable and one or more independent variables. It attempts to draw a straight line that best fits independent variables are associated with changes in the dependent variable.

15) There are 2 main branches of the statistics:-

- Descriptive Statistics:
  - Focuses on summarizing and describing the characteristics of a dataset.
- Inferential Statistics:
  - Uses sample data to draw conclusions about the population from which the sample was drawn.