STATISTICS WORKSHEET-1

Q1 to Q9 have only one correct answer. Choose the correct option to answer your question.

1. Bernoulli random variables take (only) the values 1 and 0.
   Answer-True

2. Which of the following theorem states that the distribution of averages of iid variables, properly normalized, becomes that of a standard normal as the sample size increases?
   Answer-Central Limit Theorem

3. Which of the following is incorrect with respect to use of Poisson distribution?
   Answer-Modeling bounded count data

4. Point out the correct statement.
   Answer-All of the mentioned
   The exponent of a normally distributed random variables follows what is called the log- normal distribution
   Sums of normally distributed random variables are again normally distributed even if the variablesare dependent
   The square of a standard normal random variable follows what is called chi-squared distribution

5. _____random variables are used to model rates.
   Answer- Poisson

6. Usually replacing the standard error by its estimated value does change the CLT.
   Answer- False

7. Which of the following testing is concerned with making decisions using data?
   Answer - Hypothesis

8. Normalized data are centered at_____and have units equal to standard deviations of the original data.
   Answer-0

9. Which of the following statement is incorrect with respect to outliers?
   Answer-Outliers cannot conform to the regression relationship

Q10and Q15 are subjective answer type questions, Answer them in your own words briefly.

10. What do you understand by the term Normal Distribution?

Answer-Normal Distribution is a continuous distribution in nature. It is also called Gaussian Distribution. In normal distribution mean , mode and median are same and identify bye bell curve.

11. How do you handle missing data? What imputation techniques do you recommend?

Answer- For handle missing data first we know the reason behind missing data,what are types of missing data after that detecting missing values, finding relationship among missing data and then treating missing values. Mean, Median and Mode is the imputation techniques to handle missing data.

12.What is A/B testing?

Answer- A/B test is an example of statistical hypothesis testing, a process whereby a hypothesis is made about the relationship between two data sets and those data sets are then compared against each other to determine if there is a statistically significant relationship or not.

12. Is mean imputation of missing data acceptable practice?

Answer-Mean imputation does not preserve the relationships among variables.Mean imputation is typically considered terrible practice since it ignores feature correlation.

13. What is linear regression in statistics?

Answer-linear regression is used to determine the character and strength of the association between a dependent variable and a series of other independent variables

14. What are the various branches of statistics?

Answer-There are two branches descriptive statistics and inferential statistics.