Statistics Worksheet 3 Assignment

QUES 1. Which of the following is the correct formula for total variation?

Answer. B) Total Variation = Residual Variation + Regression Variation.

QUES 2. Collection of exchangeable binary outcomes for the same covariate data are called _____ outcomes.

Answer. C) Binomial

QUES 3. How many outcomes are possible with Bernoulli trial?

Answer. A) 2.

QUES 4. If Ho is true and we reject it is called

Answer. A) Type-I error

QUES 5. Level of significance is also called:

Answer. B) Size of test

QUES 6. The chance of rejecting a true hypothesis decreases when sample size is:

Answer: B) Increase

QUES 7. Which of the following testing is concerned with making decisions using data?

Answer. B) Hypothesis.

QUES 8. What is the purpose of multiple testing in statistical inference?

Answer. D) All of the mentioned.

QUES 9. Normalized data are centered at and have units equal to standard deviations of the original data.

Answer. A) 0

QUES 10. What Is Bayes' Theorem?

Answer. It's a theorem describing how the conditional probability of each of a set of possible causes for a given observed outcome can be computed from knowledge of the probability of each cause and the conditional probability of the outcome of each cause.

QUES 11. What is z-score?
Answer. A z-score tells you where the score lies on a normal distribution curve.
Z-score indicates how much a given value differs from the standard deviation. The Z-score, or standard score, is the number of standard deviations a given data point lies above or below mean. Standard deviation is essentially a reflection of the amount of variability within a given data set.

QUES 12. What is t-test?
Answer. A t-test is an inferential statistic used to determine if there is a significant difference between the means of two groups and how they are related. It is often used in hypothesis testing to determine whether a process or treatment actually has an effect on the population of interest, or whether two groups are different from one another.

QUES 13. What is percentile?
Answer. A percentile is a comparison score between a particular score and the scores of the rest of a group.

QUES 14. What is ANOVA?

Answer. Analysis of variance, or ANOVA, is a statistical method that separates observed variance data into different components to use for additional tests. A one-way ANOVA is used for three or more groups of data, to gain information about the relationship between the dependent and independent variables. A statistical method in which the variation in a set of observations is divided into distinct components.

QUES 15. How can ANOVA help?
Answer. ANOVA is helpful for testing three or more variables. It is similar to multiple two-sample t-tests. However, it results in fewer type I errors and is appropriate for a range of issues. ANOVA groups

differences by comparing the means of each group and includes spreading out the variance into diverse sources.