STATISTICS ASSIGNMENT WORKSHEET 3

Q-1:- (B) Total Variation = Residual Variation + Regression Variation.

Q-2:- (C) Binomial.

Q-3:- (A) 2.

Q-4:- (A) Type-I error.

Q-5:- (C) Level of Confidence.

Q-6:- (B) Increase.

Q-7:- (B) Hypothesis.

Q-8:- (D) All of the mentioned.

Q-9:- (A) 0.

Q-10:- Bayes Theorem states that the conditional probability of an event, based on the occurrence of another event, is equal to the likelihood of the second event given the first event multiplied by the probability of the first event.

The theorem is named after English statistician, Thomas Bayes, who discovered the formula in 1763. It is considered the foundation of the special statistical inference approach called the Bayes' inference.

Q-11:- Zscore gives us the idea of how far from the mean the data point is situated. Also, it is a measure of how many standard deviations below or above the population mean a raw score has in it.

The basic formula of Zscore is:-

Zscore= (x-Mean)/standard deviation.

Q-12:- 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 to that groups. It is used when the datasets follow a normal distribution and have unknown variances.

Q-13:- A percentile is a term that describes how a score compares to other scores from the same dataset. It is commonly called as percentage of values in a set of data scores that fall below a given value.

Q-14:- Analysis of variance (ANOVA) is an analysis tool used in statistics that splits an observed aggregate variability found inside a data set into two parts: systematic factors and random factors.

The systematic factors have a statistical influence on the given data set, while the random factors do not. Analysts use the ANOVA test to determine the influence that independent variables have on the dependent variable in a regression study.

Q-15:- ANOVA checks the impact of one or more factors by comparing the means of different samples.

ANOVA is a way to find out if survey or experiments results are significant. It helps to identify if we have to reject the Null Hypothesis or else we have to adopt Alternative hypothesis.