STATISTICS WORKSHEET-2

Q1 b) Total Variation = Residual Variation + Regression Variation

Q2 c) binomial

Q3 a) 2

Q4 a) Type-I error

Q5 b) Size of the test

Q6 b) Increase

Q7 b) Hypothesis

Q8 d) All of the mentioned

Q9 a) 0

Q10 Bayes' Theorem describes the probability of occurrence of an event related to any condition. It is also considered for the case of conditional probability i.e., P(h|e)

Q11 A z-score is the distance from the mean, when measured in standard deviation units. The z-score is positive if the value lies above the mean, and negative if it lies below the mean.
If a Z-score = 0, the data point is identical to the mean.
If Z-score = 1.0 data point is one standard deviation from the mean.
Z-scores may be positive (the score is above the mean) or negative (the score is below the mean).

Q12 t-test is a statistical test used to compare the means of two groups.
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.

Q13 Percentile – For a particular score, the percentage of observations having score less than that particular score from the rest of the score in a sample observation is percentile.
Percentile describes how a score compares to other scores in the same observations set.
eg. A score of 110 is roughly in the 90th percentile, the score is better than 90% of the others scores.

Q14 Analysis of Variance (ANOVA) is test to analyse differences among means of the population by examining the amount of variation within each sample relative to the amount of variation between the samples.

Q15 :

- ANOVA is suitable for testing 3 or more variables unlike t-test which can be done only 2 sample groups.
- It results in less Type I errors (false positives).
- It helps to conclude whether to reject the null hypothesis.
- It can determine the impact of independent variables on the dependent variable for regression studies.