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

Anwer no 1

b) Total Variation = Residual Variation + Regression Variation

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

Anwer no 2

c) binomial

3. How many outcomes are possible with Bernoulli trial ?

Anwer no 3

a) 2

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

Anwer no 4

a) Type-I error

5. Level of significance is also called:

Anwer no 5

b) Level of confidence

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

Anwer no 6

a) Decrease

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

Anwer no 7

b) Hypothesis

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

Anwer no 8

c) Minimize false positives

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

Anwer no 9

a) 0

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

Anwer no 10

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.

Anwer no 11

11) 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.

12) What does t-test mean?

What Is a T-Test? 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**. T-tests are used when the data sets follow a normal distribution and have unknown variances, like the data set recorded from flipping a coin 100 times.

13) What is percentile?

A percentile (or a centile) is a measure used in statistics indicating the value *below which* a given percentage of observations in a group of observations fall.

14) What is ANOVA?

Analysis of Variance (ANOVA) is **a statistical formula used to compare variances across the means (or average) of different groups**. A range of scenarios use it to determine if there is any difference between the means of different groups.

15) How can ANOVA help

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.