FLIP ROBO

STATISTICS WORKSHEET-3

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

1. Which of the following is the correct formula for total variation?
a) Total Variation = Residual Variation – Regression Variation
b) Total Variation = Residual Variation + Regression Variation
c) Total Variation = Residual Variation * Regression Variation
d) All of the mentioned

   Correct option: b

2. Collection of exchangeable binary outcomes for the same covariate data are called __ outcomes.
   a) random
   b) direct
   c) binomial
   d) none of the mentioned

   Correct option: c

3. How many outcomes are possible with Bernoulli trial?
   a) 2
   b) 3
   c) 4
   d) None of the mentioned

   Correct option: a

4. If Ho is true and we reject it is called
   a) Type-I error
   b) Type-II error
   c) Standard error
   d) Sampling error

   Correct option: a

5. Level of significance is also called:
   a) Power of the test
   b) Size of the test
   c) Level of confidence
   d) Confidence coefficient

   Correct option: c

6. The chance of rejecting a true hypothesis decreases when sample size is:
   a) Decrease
   b) Increase
   c) Both of them
   d) None

Correct option: b

7. Which of the following testing is concerned with making decisions usingdata?
   a) Probability
   b) Hypothesis
   c) Causal
   d) None of the mentioned

   Correct option: b

8. What is the purpose of multiple testing in statistical inference?
   a) Minimize errors
   b) Minimize false positives
   c) Minimize false negatives
   d) All of the mentioned

   Correct option: d

9.   Normalized data are centred at___and have units equal to
   standard deviations of the original data
   a) 0
   b) 5
   c) 1
   d) 10

   Correct option: a

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

10. What Is Bayes' Theorem?

    The Bayes' theorem describes the probability of an event based on prior knowledge of the conditions that might be relevant to the event.

11. What is z-score?
    Zscore for a particular data value represents how many standard deviations the data value lies above or below the mean

12. What is t-test?

    T-test is a type of inferential statistic which is used to determine if there is a significant difference between the means of two groups which may be related in certain features.

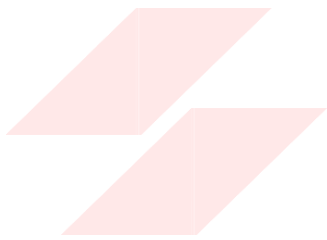13. What is percentile?

   The percentile of a dataset is the data value such that percent of the values in the data set are at or below that value.

14. What is ANOVA?

   ANOVA compares the amount of variation between the groups with the amount of variation within the groups

15. How can ANOVA help?

   ANOVA can help in making decision that we need to reject the null hypothesis or we need to accept the alternate hypothesis.