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

Answer : b. Total Variation = Residual Variation + Regression Variation

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

Answer : c. binomial

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

Answer : a. 2

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

Answer : a. Type-I error

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

Answer : a. Power of the test

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

Answer : d None

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

a) Probability
b) Hypothesis
c) Causal
d) None of the mentioned

Answer : b. Hypothesis

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

Answer : d. All of the mentioned

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

Answer : a. 0

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

10. What Is Bayes' Theorem?

Answer : Bayes' Theorem tries to find out the probability of upcoming event on the basis of the knowledge of probability of already known event.

11. What is z-score?
Ans: S-Score is a method of finding out how far a data point is from the centre of distribution. If it is +-3 then it is farthest from the centre and anything beyond this would be considered outlier.

12. What is t-test?
Ans : It is statistical test to compare the means of two groups of data.

13. What is percentile?
Answer : A percentile is a comparison score between a particular score and the scores of the rest of a group. It shows the percentage of scores that a particular score surpassed. For example, if you score 75 points on a test, and are ranked in the 85 th percentile, it means that the score 75 is higher than 85% of the scores.

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.

15. How can ANOVA help?
Answer: ANOVA, which stands for Analysis of Variance, is a statistical test used to analyze the difference between the means of more than two groups. So it can help in analyzing many things like before and after glucose level can be tested to decide whether medication is required and for how much quantity.