**STATISTICS WORKSHEET-3**

Q1. Which of the following is the correct formula for total variation?

Ans: B) Total Variation = Residual Variation + Regression Variation

Q2. Collection of exchangeable binary outcomes for the same covariate data are called \_\_\_\_\_ outcomes.

Ans: C) Binomial

Q3. How many outcomes are possible with Bernoulli trial?

Ans: A) 2

Q4. If Ho is true and we reject it is called

Ans: A) Type-I error

Q5. Level of significance is also called:

Ans: A) Power of the test

Q6. The chance of rejecting a true hypothesis decreases when sample size is:

Ans: Increase

Q7. Which of the following testing is concerned with making decisions using data?

Ans: Hypothesis

Q8. What is the purpose of multiple testing in statistical inference?

Ans: D) All of the mentioned

Q9. Normalized data are centred at and have units equal to standard deviations of the original data

Ans: A) 0

Q10. What Is Bayes' Theorem?

Ans: Bayes theorem helps to determine the probability of an event with random knowledge. It is used to calculate the probability of occurring one event while other one already occurred. It is a best method to relate the condition probability and marginal probability.

Q11. What is z-score?

Ans: A Z-score is a numerical measurement that describes a value's relationship to the mean of a group of values. Z-score is measured in terms of standard deviations from the mean. If a Z-score is 0, it indicates that the data point's score is identical to the mean score.

Q12. What is t-test?

Ans: A t-test is a statistical test that compares the means of two samples. It is used in hypothesis testing, with a null hypothesis that the difference in group means is zero and an alternate hypothesis that the difference in group means is different from zero.

Q13. What is percentile?

Ans: 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.

Q14. What is ANOVA?

Ans: 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.

Q15. How can ANOVA help?

Ans: 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.

**THE END**