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?
   B Total Variation = Residual Variation + Regression Variation

2. Collection of exchangeable binary outcomes for the same covariate data are called_____outcomes.
   C) binomial

3. How many outcomes are possible with Bernoulli trial?
   a) 2

4. If Ho is true and we reject it is called
   a) Type-I error

5. Level of significance is also called:
   b) Size of the test

6. The chance of rejecting a true hypothesis decreases when sample size is:
   b) Increase

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

8. What is the purpose of multiple testing in statistical inference?
   d) All of the mentioned

9. Normalized data are centred at____and have units equal to standard deviations of the original data
   a) 0

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

10. What Is Bayes' Theorem?

    Ans- we can calculate a probability for given condition based on probability of occurrence another conditional event divide by event two and multiply by event one.

    $P(A|B) = P(A)\cdot P(B|A)/ P(B)$

11. What is z-score?
    z-score is the number of standard deviations given above and below the given data points. We can calculate z-score by below formula.
    z-score = X- X mean / standard division

12. What is t-test?
    t-test is a statistical test that is used to compare the means of two groups. T-test can be used for hypothesis testing to check whether the null or alternative hypothesis are correct or not.

13. What is percentile?
    Percentile is a score given on basis of the ranking of other elements of the group. It depends on the percentage and the ranking of that element based on that percentage.

14. What is ANOVA?
    ANOVA refers to Analysis of Variance which is an analytical tool that separates observed variance data into several components to use for different tests.

15. How can ANOVA help?
    ANOVA can be used to test hypothesis and it can be used to understand various data point and find observation.